GREENWELD
1992 SPRING SUPPLEMENT

Welcome to our 1992 Spring Supplement - free with our compliments with your favourite monthly magazine! Inside its 32 pages you'll find the usual mix of new and surplus items, together with a preview of a new category to be included in future Catalogues - Graphic Design Products. We're now stocking Staedtler and Kuretake pens, pencils, markers, drawing instruments, boards and cutting mats, as well as Humbrol airbrushes and a wider selection of paper, labels, staplers etc. Every constructor has to write and draw circuits from time to time, so we hope these additions prove useful to you. There's a wide range of new surplus lines all offering exceptional value for money, and don't miss the remarkable offer of a Hitachi scope with 25% discount on the back page! We look forward to receiving your order soon - the Order Form is on Page29.

NEWSLINE weekly update on new stock. Call 0891 505121 (48p per min. peak, 34p off peak

LOOK!! FREE
WITH ORDERS OVER £20.00
EASIWIRE KIT Retail Price £15

The easy to use no-soldering wiring tool which makes construction of small electronic projects so simple!! All included in the kit are: wiring pen, utility tool, punched wiring board, self adhesive sheet, spring loadedterminals and jacks, spare spool of wire, excellent instruction book

You MUST stick this coupon to the Order Form for your FREE Easiwire

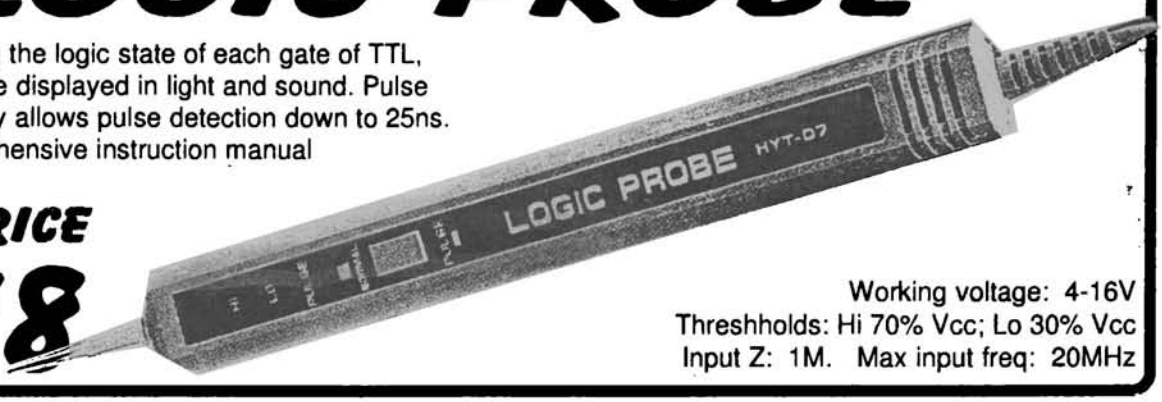
LOGIC PROBE

Suitable for displaying the logic state of each gate of TTL, CMOS etc. Logic state displayed in light and sound. Pulse enlargement capability allows pulse detection down to 25ns. Supplied with comprehensive instruction manual

Order Code Y132

SPECIAL PRICE

£8.88



Working voltage: 4-16V
Threshholds: Hi 70% Vcc; Lo 30% Vcc
Input Z: 1M. Max input freq: 20MHz

POCKET PERSONAL DMM

HC32 This neat little autoranging digital multimeter with built in test leads has a big range of features for such a handy instrument - up to 500V ac/dc, 6 resistance ranges to 20M, continuity tester, diode checker and both ac/dc current up to 200mA! Size 100x67x14mm

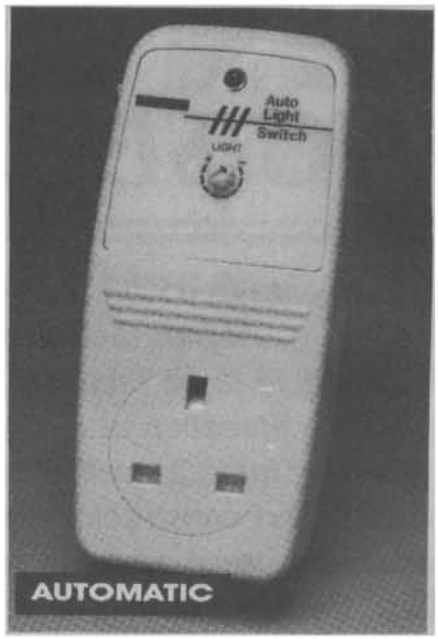
PERFECT PRICE £15.00

F606 £13.95 6+ 9.92

LIGHT ACTIVATED SWITCH

Plug-in light activated switch, ideal for switching on lights automatically. When the ambient light level falls to a preset point power will be switched on to the built-in socket for a preset period of time. Light level and time-on period are fully adjustable.
Controls: Light level, time

Power 220/240Vac 50Hz
Max. load 500W



F608 £11.95 6+ 7.84

AUTOMATIC LIGHT SWITCH

Plug-in light switch which turn on table lamps, radios or other low power appliances (up to 500W) when the ambient light level falls below a preset level, switching off again when the light level rises.

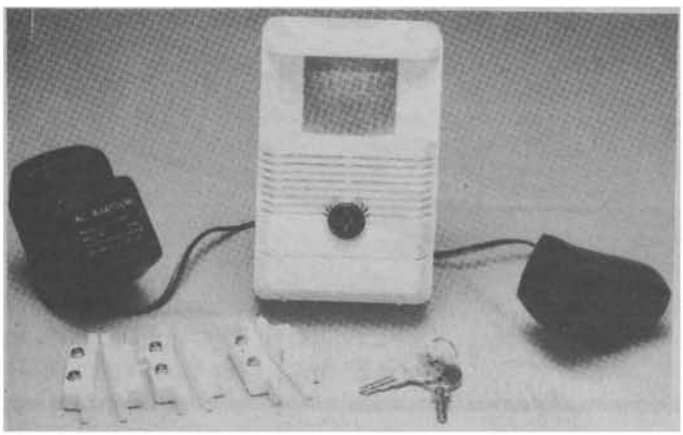
Power 220/240Vac 50Hz
Max. load 500W
Dims ..... 145 x 65 x 42mm

F607 £21.95 6+ 14.67

PLUG-IN TIMER

Plug-in timer capable of up to 56 programmable switching operations per week. The programming structure consists of 4 timed events occurring on each day, Monday to Friday and 4 timed events on both Saturday and Sunday (one event is an on/off cycle). The timer is simple to use and comes with full instructions.

Power 220/240Vac 50Hz
Max. load 3000W
Dims ..... 145 x 65 x 42mm

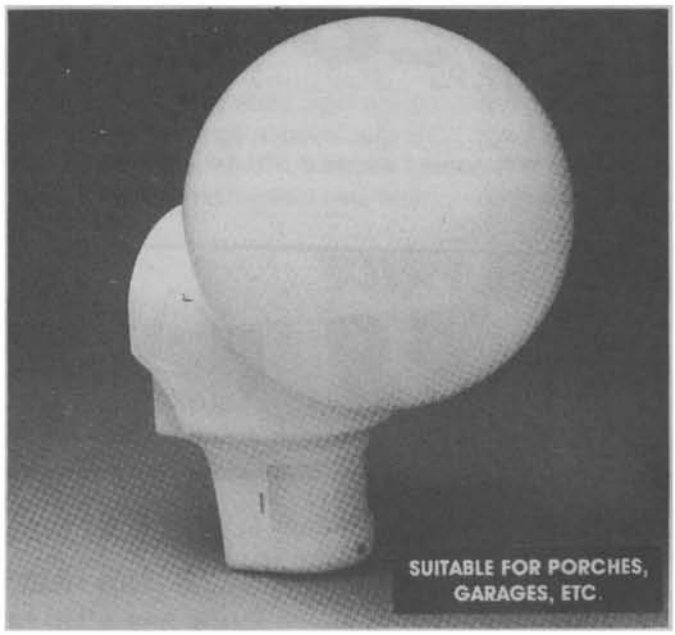


F653 £47.95 3+ 31.89

PIR ALARM KIT

A compact PIR alarm kit, ideal for small home installations, garages, caravans, trailers, trucks, boats, etc. The kit contains a combined PIR and alarm box, 3 magnetic reed switches, compact siren and power supply. Instruction manual and fixing screws included. An alkaline PP3 can be added for power failure protection.

PIR coverage 100m²
Exit delay ..... 2.5 minutes
Entry delay ..... 15 seconds
Alarm reset time ..... 60 seconds
Power ..... 12Vdc or AC adaptor
Dims ..... 140 x 90 x 56mm (alarm panel/PIR)

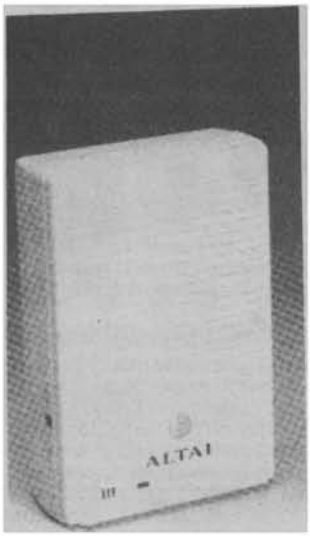


L134 £34.95 4+ 23.72

PIR GLOBE LIGHT

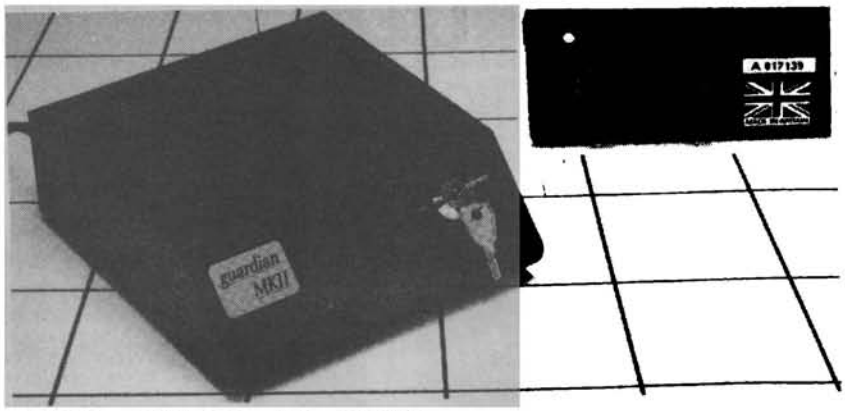
A stylish globe shaped lamp with built-in PIR detector which reacts to body heat, switching on the lamp whenever somebody is within the detection zone. A photo detector built into the unit prevents daylight operation. The sensitivity (detection range) is adjustable. Power: 220/240Vac 50Hz.

T072A £29.95 4+ 19.70



MESSAGE RECORD AND PLAYBACK

T072A ANNUNCIATOR
A stand alone PIR message annunciator on which your own message, up to 20 secs long can be recorded on a microchip and played back every time someone is detected by the PIR. The recorded message can be speede up or slowed down by a rotary control on the side. The message can be over-written at any time.. Note: The message will be lost when the power is switched off.
Dims: 92x136x46
Power: 4xAA cells or external 6V .

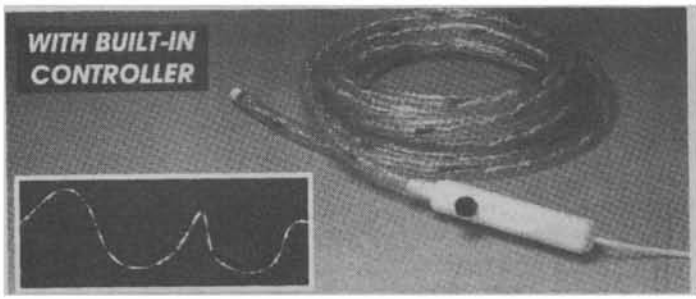


F650 £95.00 5+ 60.30

VOLUMETRIC ALARM

A self-contained burglar alarm whch requires nothing more of the user than to plug it in and switch it on, no further wiring is necessary. The alarm works by monitoring the air pressure around it, any change such as opening a door or window in the building will trigger the alarm 80 seconds later, unless the alarm is switched off by the key. An additional external alarm box is available (F651). Built-in back-up batteries prevent the alarm from being switched off by unplugging.

Exit delay time ..... 40 seconds
Entry delay time ..... 20 seconds
Power 220/240Vac 50Hz
Dims ..... 174 x 60 x 190mm

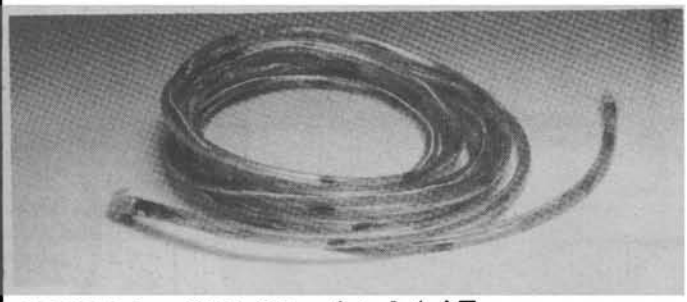


G008S £39.95 3+ 26.13

ROPE LIGHT

Self contained 3-colour rope light with built-in speed controller. 3 circuits of 20 lamps within a tough, blister effect 6m tube.

Length: 6m
Power: 220/240Vac 50Hz

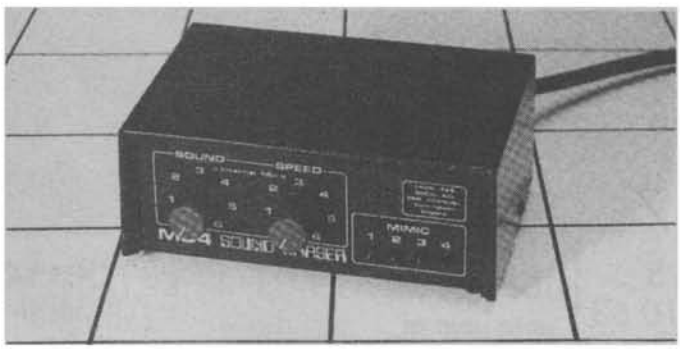


G008RA £21.95 3+ 14.67

ROPE LIGHT

5m tough but flexible plastic tube rope light. 4 circuits of 20 coloured bulbs. May be connected end to end to increase length. Suitable controller: G006M.

Length 5m

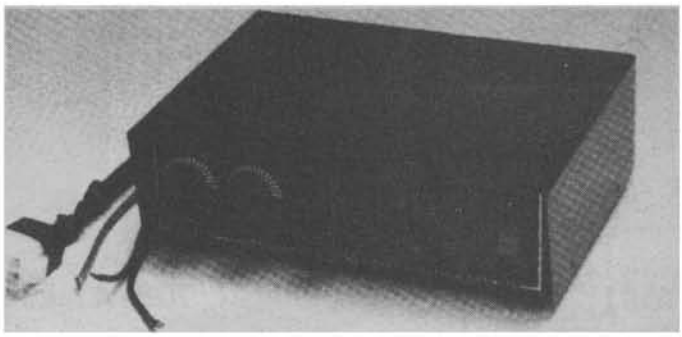


G006P £39.95 3+ 26.73

4-CHANNEL CONTROLLER

4-channel lighting controller with built-in mic, sensitivity control and speed control. Four front panel LEDs mimic the lighting effect. Output via 8-pin Bulgin socket

Max output ..... 1000W/channel resistive
..... 600W/channel inductive
..... 2500W total
Power 220/240Vac 50Hz
Dims ..... 184 x 100 x 55mm



G006M £49.95 3+ 32.83

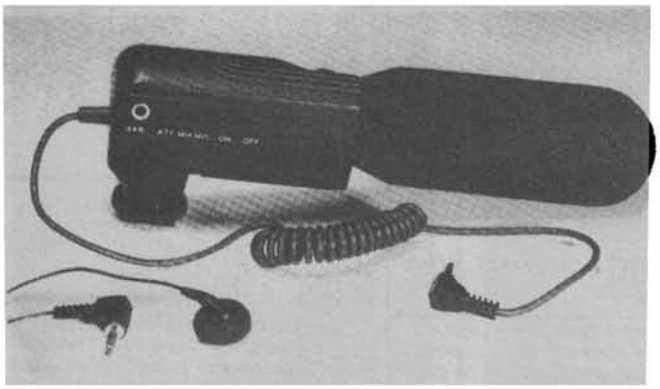
4-CHANNEL CONTROLLER

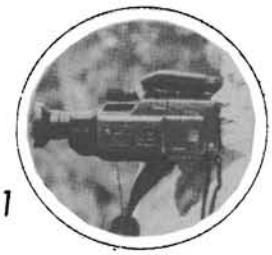
4 channel lighting controller with five built-in sound activated effects: 1 on/3 off, 2 on/2 off, 3 on/1 off, 4 on/0 off plus random, forward and reverse for all four sequencies. Outputs via Bulgin socket and short lead with connector for rope lights.

Max output 1000W/channel,
..... 2500W total
Power 220/240Vac 50Hz
Dims ..... 184 x 100 x 55mm

VIDEO/AUDIO BARGAINS!

ENHANCE YOUR HOME VIDEOS WITH THESE PRODUCTS!!



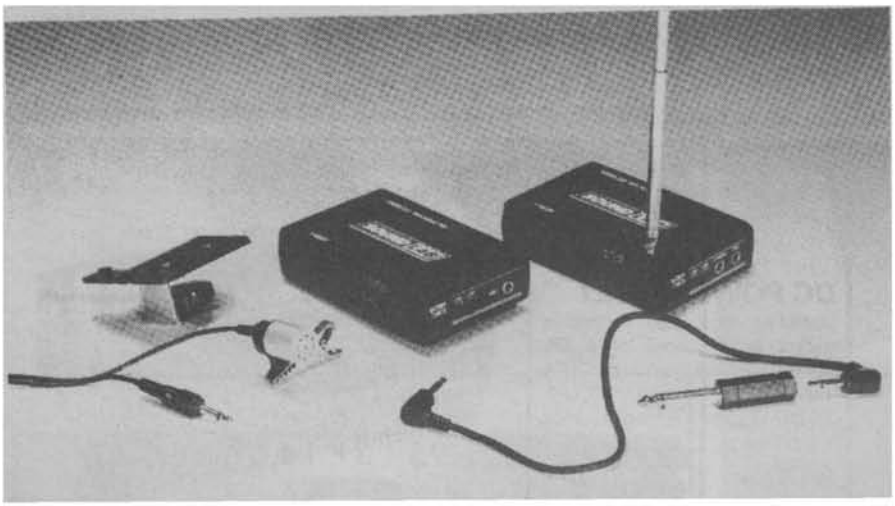


G164G £32.95 3+ 22.11

CAMCORDER DUBBING MIC

A unique mic designed for direct dubbing of an external soundtrack, voice-over, etc. at source, whilst the camcorder is recording. A stereo 3.5mm input is provided in the side of the mic for insertion of the soundtrack and a rotary control provides balance between mic and soundtrack. An earphone jack is provided for monitoring the mix. Supplied with a mono in-ear phone.

Type	Super uni-directional electret condenser
Impedance	1kΩ
Response	80-15000Hz
Sensitivity	-48dB (@ mix max.)
Length	185mm



G211 £49.95 2+ 35.52

WIRELESS MICROPHONE

A 3-channel 2-part wireless microphone system designed for use with video cameras. The tie-clip mic has a remote belt clip transmitter with on/off switch. The receiver has a hot shoe for mounting on the video camera. The system allows greater mobility with a microphone than can be achieved with the camcorder mic.

WITH VINYL CARRYING CASE

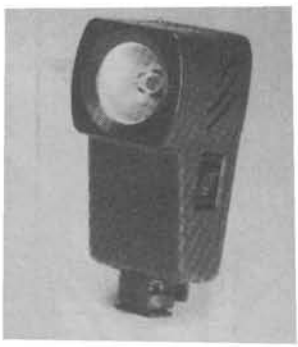
T081 £47.95 3+ 32.09

VIDEO LIGHT

30W halogen video light with 6V 1700mAh battery pack. The video light is provided with a synchronisation lead which, when the light is switched to "remote", allows the light to switch on when the camcorder is switched on (Sony and Panasonic camcorder). The on/off/ remote switch has a lock button to prevent accidental movement.

Packed: BOX

T081AA
Spare bulb **£4.95** 5+ 3.28



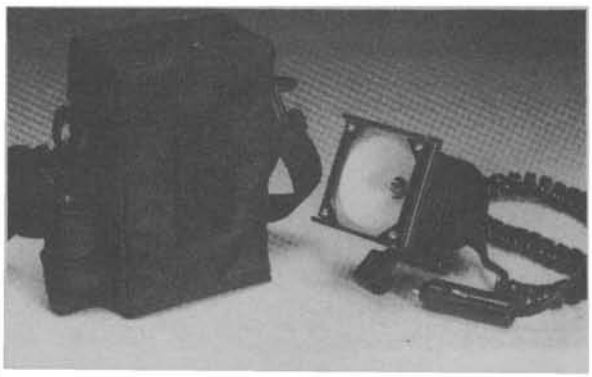
T081A £15.95

VIDEO LIGHT 4+ 10.63

30W video camera light with hot shoe fitting and power on/off switch. Accepts 6V 1700mAh battery pack (Sony NP55 and NP77 typically)

Packed: BOX

T081AA
Spare bulb **£4.95**



T081B £66.95 3+44.89

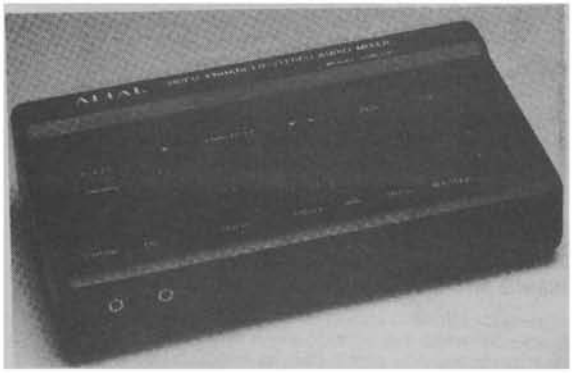
VIDEO LIGHT KIT

A semi-professional video light kit comprising 100W halogen lamp, remote 12Vdc 7Ah sealed lead acid battery in carrying case with shoulder strap, 220/240Vac operated battery charger and camcorder power supply adaptor

Packed: BOX

T081BA Spare bulb **£3.75** 5+ 2.80

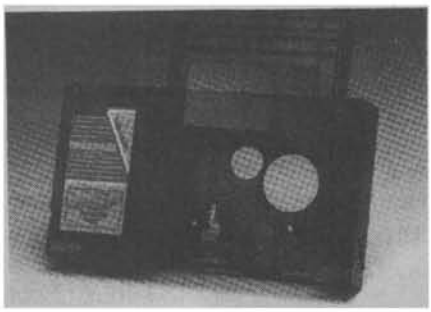
PRICES IN BOLD TYPE INCLUDE VAT: PRICES IN LIGHT DO NOT



T128D £36.95 5+ 24.79

VIDEO ENHANCER/AUDIO MIXER

A 3-channel stereo video sound mixer with a built-in video enhancer, specificially designed for video dubbing. The audio input from the camera/VCR, mic and music sources can be mixed at will, with overall output conrolled by a master slider. The video enhancer will clean up the picture on older recordings. Powered by an external 12Vdc power supply (not supplied). Complete with all connecting leads and adaptors.



T122D £12.95 10+ 8.56

VHS-C TO VHS ADAPTOR

All mechanical adapter cassette allowing the playback of VHS-C tapes on VHS video players. The action of closing the door moves the tape into position.

T122K £6.95 10+ 4.80

45 minute tape.

T122J £6.95 10+ 4.80

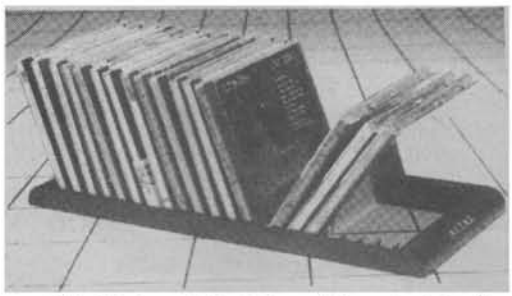
30 minute tape.

GAFFA TAPE

50m rolls of 2" wide self adhesive Gaffa tape

L099R Silver £6.50 10+ 4.36

L099S Black £6.50 10+ 4.36



A163A £2.95 40+ 1.03

CD RACK

A unique CD storage system which will hold up to 20 CD's, in their cases, allowing them to flip back and forth as you search for the CD you want. Free standing and interlocking.

DC POWER LEAD

Useful universal lead - reversible socket on the end of a DC power lead with 4 interchangeable plugs - 1.3, 2.1, 2.5DC & 3.5mm mono jack. 1.8m long.

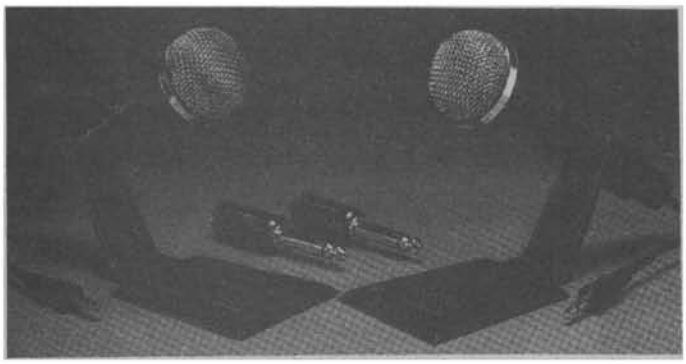
A133A £1.25 50+ 0.75

A005A £27.95 5+ 19.03

STEREO PRE-AMP

Mains powered stereo pre-amp suitable for insertion between turntables, mics and other low level sources and aux/line inputs on mixers, amps, stack systems etc.

Input impedance	50kΩ
Max. input level	33mV (@ 1kHz)
Max output level	3.8V (@ 47kΩ load)
S/N ratio	more than 50Hz
Input sensitivity	2.5mV (output 300mV)
Frequency response	30 - 15kHz (RIAA)
Power	220/240Vac 50Hz
Dims	140 x 75 x 40mm



G170C £5.95 10+ 3.35

DYNAMIC MIC 200Ω

Pair of matched dynamic microphones. Black plastic body with chrome metal grille and chrome trim. On/off switch. Independent 1.2m leads terminating in 3.5mm jack plugs. Mic stands and 6.35mm adaptors included.

Type	Omni-directional dynamic
Impedance	200Ω
Response	90-10000Hz
Sensitivity	-76dB @ 1kHz
Dia: Head	32mm.
Body	17mm
Length	120mm

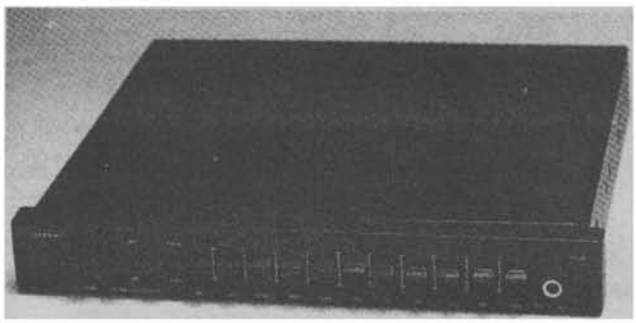
A170A £2.95 10+ 1.88

TAPE HEAD DEMAGNETIZER

A compact and easy to use tape head demagnetizer. Simply plug the demagnetizer in, press the red button and place the tip gently in contact with the tape head. Rotate the tip across the surface and withdraw slowly. Demagnetizng every 50 hours of play time improves playback and record quality.

Power: 220/240Vac 50Hz

PRICES IN BOLD TYPE INCLUDE VAT: PRICES IN LIGHT DO NOT

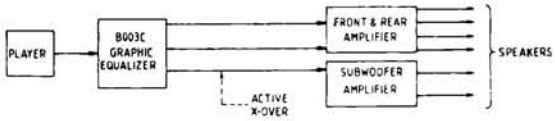


B003C £39.95 5+ 26.40

GRAPHIC EQUALIZER

11-band graphic equalizer with sub-woofer output and CD input. The sub-woofer output has an adjustable cut-off frequency and level control. The case is standard DIN width for in-dash or under-dash mounting. Low level inputs and outputs only, via phono sockets.

Frequency response	20 - 25000Hz
Total harmonic distortion	Less than 0.05%
S/N ratio	85dB
Separation	65dB
Control frequencies	60, 120, 250, 380, 500, 750, 1k, 2k, 4k, 8k and 16kHz
Control range	12dB boost or cut
Power	12 - 14Vdc
Dims	178 x 25 x 140mm



A085 £99.95 2+ 73.70

RADIO HEADPHONE SYSTEM

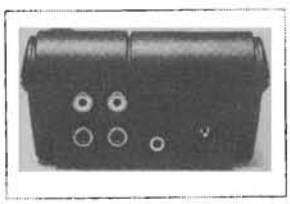
A radio headphone system comprising a radio transmitter, a belt-clip receiver and a pair of high quality headphones. The transmitter will accept inputs from three separate sources; CD, DAT, tape etc and additionally has a built-in mic with talk button for contacting the headphone wearer. The system allows complete freedom of movement within a range of approximately 100 feet of the transmitter.

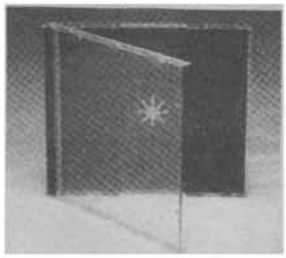
Transmitter:

Input sensitivity	Source 1 & 2: 10kΩ/100m
	Source 3: 22kΩ/100m
Power	12Vdc 150mA

Receiver:

Frequency response	48 - 16000Hz
Power output	30mW/channel
Range	100ft (36m)
Power supply	PP3 battery
Battery life	8hrs nominal





A162B £1.20 50+ 0.66

REPLACEMENT CD CASES

Replacement CD storage cases designed to be direct replacements for the originals supplied with compact discs. Two cases per pack.

GREENWELD ELECTRONIC COMPONENTS

A087F £8.95 10+ 5.15

STEREO HEADPHONES WITH BOOM MIC

Lightweight stereo headphones with adjustable dynamic boom mic. Tough plastic headband with stainless steel adjusters. Foam padded earpieces containing high quality samarium cobalt transducers for clear sound reproduction. High sensitivity miniature dynamic mic cartridge with foam windshield. Straight screened lead terminates in 6.35mm stereo plug for headphones and a 3.5mm mono plug for mic.

Headphones:

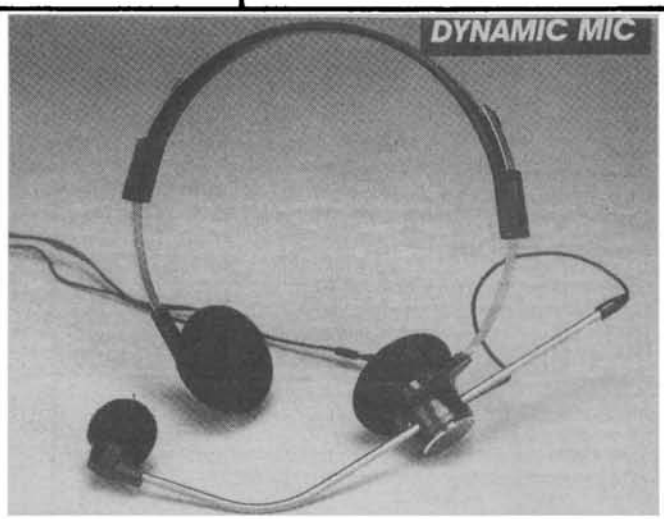
Type	Mylar transducer
Impedance	32Ω
Response	20 - 20000Hz
Power	150mW

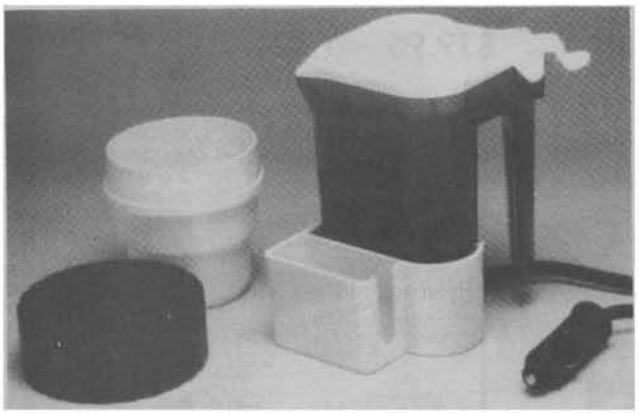
Microphone:

Type	Omni-directional dynamic
Impedance	250Ω
Sensitivity	-78dB @ 1kHz

General:

Lead	2.5m straight screened
Plugs	6.35mm stereo and 3.5mm mono
Weight	80g



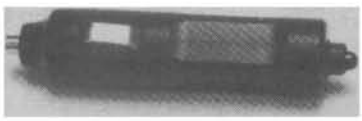


B049A £12.95 6+ 7.50

12Vdc TRAVEL KETTLE

12Vdc kettle complete with mounting stand, cup and cup holder with a self-adhesive base. Plugs directly into a car cigar lighter socket for power. A power-on light is provided at the base of the kettle. Ideal for cars, vans, campers etc.

Capacity ..... 0.5 pints (0.3lts)
Power 12Vdc 9A, 14Vdc 11A
Dims ..... 143 x 125 x 112mm (approx)



B200Z £1.95 20+ 1.14

PLUG-IN FLASHING LED

A flashing LED built into a car cigar lighter plug to give visual warning that an alarm is activated (whether or not an alarm is fitted). Simply plugs into the car's cigar lighter socket.

B201 £17.95 10+ 11.93

CAR ALARM

Keyless, self-contained car alarm with simple, three wire connection into the car's wiring harness. The alarm is self arming one minute after the ignition is switched off. The alarm is current sensing and will operate 10 seconds after a door is opened. Once triggered the alarm will sound for 30 seconds before re-setting.

Operation ..... Current sensing
Reset time ..... 45 seconds
Power ..... 12 - 14Vdc

B047D £12.95 10+ 8.84

AIR PURIFIER AND IONIZER

A compact, stylish ionizer and air purifier with a coverage volume of 14m³. Ideal for in car use with the DC lead provided or as a room purifier with the AC adaptor provided. Removes unpleasant smells, airborne dust, bacteria, tobacco smoke etc.

Power ..... 9-15Vdc or 220/240Vac via adaptor
Dims ..... 160 x 95 x 43mm

B047E £9.95 10+ 6.50

AIR PURIFIER AND IONIZER

A compact, stylish ionizer and air purifier designed specifically for car, truck and bus use with a coverage volume of 14m³. Removes unpleasant smells, airborne dust, bacteria, tobacco smoke etc. Supplied with a double sided self adhesive pad.

Power 12Vdc 1.8W
Dims ..... 110 x 110 x 65mm

Y122HR £99.95 2+ 66.73

10MΩ

The Y122HR (M365OCR) multimeter is capable of communicating either the current LCD readout or up to 5 stored measurement values direct to data acquisition systems, PC's, pen plotter, printer, etc. via its MT/RS232C interface cable. Interface cable and program disc included with meter.

- ★ 3.5 digit 17mm LCD display
- ★ 30 ranges including 20A ac/dc
- ★ Data hold
- ★ Max/min value capture
- ★ 40 point analog bargraph
- ★ Frequency counter
- ★ Logic test with auto level
- ★ Capacitance test
- ★ Continuity test with buzzer
- ★ Transistor and diode test
- ★ Built and tested to IEC 348
- ★ Fully shrouded test leads

Battery, instruction manual and carrying case included.

AC volts	0-200m-2-20-200-750Vac ± 0.8%
DC volts	0-200m-2-20-200-1000Vdc ± 0.3%
AC current	0-2m-200m-20Aac ± 1.8%
DC current	0-200µ-2m-200m-20Adc ± 0.5%
Resistance	0-200-2k-20k-200k-2M-20MΩ ± 0.5%
Capacitance	0-2000pf-200n-20µF ± 2.0%
Frequency	0-20k-200kHz ± 2.0%
Transistor hFE	0-1000 NPN/PNP
Dims	176 x 90 x 36mm

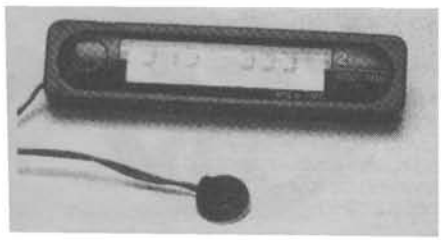
Packed: BOX

Y137M £8.95 5+ 6.03

DIGITAL THERMOMETER

A dual sensor digital thermometer designed for comparative temperature measurement, for example inside/outside temperature. The thermometer can be free standing or mounted with the Velcro strips provided. The remote sensor is fitted with a 3m lead and mounted with double sided tape. A digital clock is built in.

Temperature range	-20 O to +70OC ± 1OC
Resolution	0.1OC
Power	P009H button cell

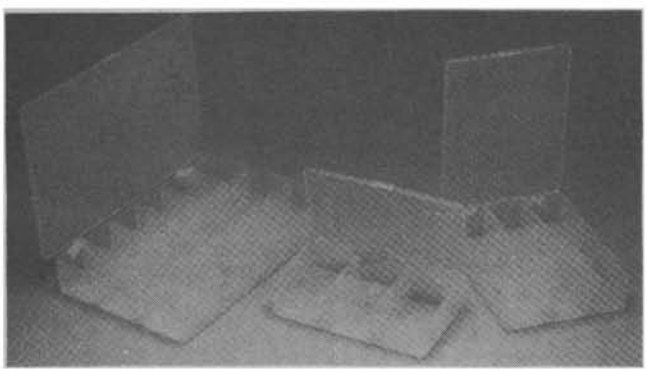


Y137N £11.95 5+ 7.50

DIGITAL THERMOMETER

Dual channel inside/outside comparative temperature thermometer with dual readout display. Dual thermocouple, one internal and one on a 3m extension lead. Free standing or double sided tape attachment.

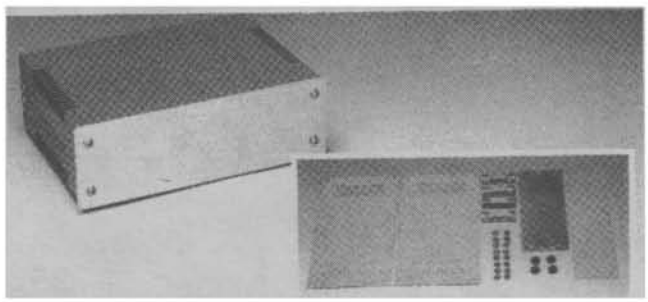
Temperature range	–50 to +70°C
Power	1 x P009H battery
Dims	107 x 25 x 13mm



COMPARTMENT BOXES

A range of three strongly constructed polypropylene compartment storage boxes with hinged lids. Semi-transparent finish.

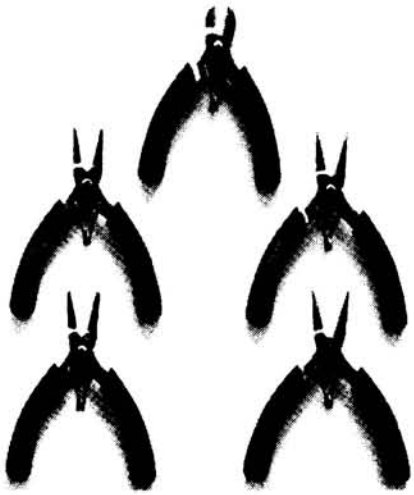
F662	180 x 97 x 43mm 5 compartments	**£1.20**	40+ 0.74
F662A	185 x 142 x 42mm 9 compartments	**£1.60**	40+ 1.03
F662B	275 x 180 x 42mm 18 compartments	**£1.99**	40+ 1.33



METAL CASES

A range of flat pack steel cases with aluminium front and rear panels. Rust proof finish, ready for painting.

Ref:	Size		
F660	80 x 46 x 85mm	**£3.96**	10+ 2.65
F660A	110 x 50 x 80mm	**£4.78**	10+ 3.20
F660B	140 x 56 x 110mm	**£5.96**	10+ 3.99
F660C	180 x 56 x 130mm	**£7.90**	10+ 5.29
F660D	230 x 56 x 190mm	**£10.99**	10+ 7.37

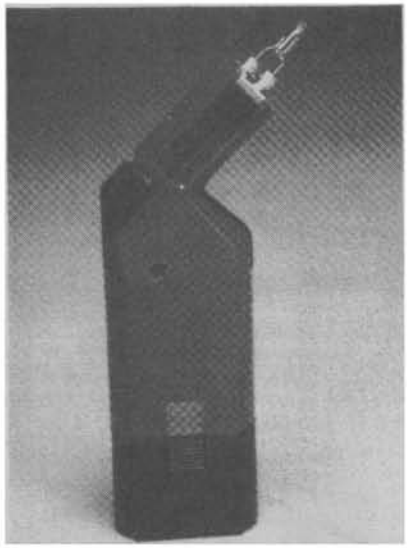


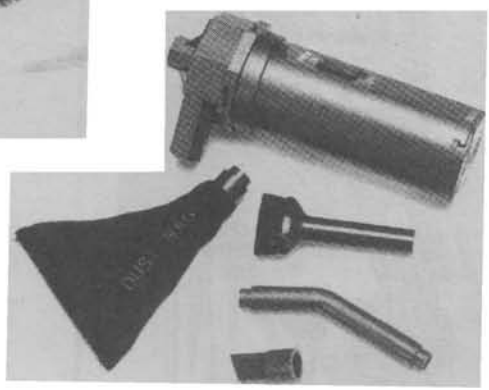
Y030B £12.95
5+ 8.01

PRECISION TOOL SET

5-piece precision, pressed stainless steel tool set with precision ground blades. The set comprises side cutters, bent nose pliers, round nose pliers, long nose pliers and flat nose pliers. Sprung, insulated handles.

Length .....4" (100mm)





A150B £6.95
10+ 3.95

MINI VACUUM CLEANER

A battery powered mini vacuum cleaner which is ideal for removing the dust from turntables, cameras, video recorders, computer keyboards etc. 5 piece kit. Powered by four AA alkaline battieries (not supplied).

Power .....4 x AA alkaline batteries

Y060S £6.95 10+ 4.42

PORTABLE SOLDERING IRON

Battery operated portable soldering iron. Powered by 4 'C' cells in the handle (not supplied). Tip heats up in seconds from operation of the biased off slide switch. Tip retracts into the body for safety. Supplied with one spare tip and 300mm of solder.

Power .....6Vdc (4 x C cells)
Dims .....190 x 66 x 30mm

Y006E £6.95
10+ 4.29

PRECISION MAGNIFIER

Precision made magnifer with a fixed focus. The lens fits directly over a graduated scale for magnified measurement. Metric and imperial scales. All metal construction. Folds down for storage in the vinyl wallet provided.

Dims.....53 x 48 x 39 (in use)
.....47 x 39 x 14 (folded)

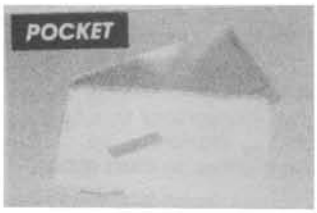
PRECISION

Y012C £9.95
10+ 6.67

40-PIECE TOOL KIT

A 40-piece tool kit comprising a ratchet driver handle with a lockable knuckle, 100mm extension bar, 7 torque driver tips, 8 hex key tips, 6 screwdriver tips, 2 square drive tips, 1 hex to square drive adaptor, 7 metric sockets and 7 imperial sockets in a hinged plastic case.

POCKET



Y006C 35p
100+ 0.19

PRISMATIC MAGNIFIER

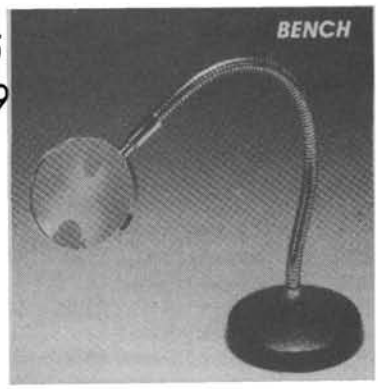
Credit card size prismatic magnifier. All plastic.

Y006D £7.95
10+ 5.29

GOOSENECK MAGNIFIER

2X magnification 3" diameter on a flexible 13" gooseneck with heavy base. Useful for close, precise work.

BENCH



PRICES IN **BOLD** TYPE INCLUDE VAT: PRICES IN LIGHT DO NOT

Graphic Supplies by Staedtler

(a) Pencils
The Noris school and office pencil available in 5 colour coded degrees:

Code	Description	1-11	12+	144
S120-2B	2B Pencil	**24p**	0.17	0.14
S120-B	B Pencil	**24p**	0.17	0.14
S120-HB	HB Pencil	**24p**	0.17	0.14
S120-H	H Pencil	**24p**	0.17	0.14
S120-2H	2H Pencil	**24p**	0.17	0.14

(b) Propelling Pencils
Fineline propelling pencils. Available in 4 sizes for technical applications. Contoured slip-proof finger grip. Perfectly balanced for convenience and precision. Has 3mm retractible safety sleeve. Replaceable eraser with cleaning pin under push button.

Code	Description	1-9	10+	30+
S775-03	0.3mm lead	**£2.75**	1.95	1.56
S775-05	0.5mm lead	**£2.75**	1.95	1.56
S775-07	0.7mm lead	**£2.75**	1.95	1.56
S775-09	0.9mm lead	**£2.75**	1.95	1.56

Replacement leads. Fineline black leads with extraordinary point strength, slow wear and opacity. Supplied in tubes of 12.

Code	Description	1-9	10+	30+
S250-03	0.3mm HB lead	**£1.70**	1.20	0.97
S250-05	0.5mm HB lead	**£1.05**	0.74	0.60
S250-07	0.7mm HB lead	**65p**	0.46	0.37
S250-09	0.9mm HB lead	**65p**	0.46	0.37

(Available in different degrees of hardness to order)

(c) Lead Holders
The MARS Technico lead holder with sliding pocket clip. Lead sharpener built into the push button. For all 2mm leads.

Code	Description	1-9	10+	30+
S780CCA	Mars holder	**£3.25**	2.30	1.84

Lightweight plastic model for 2mm leads

Code	Description	1-9	10+	30+
S789OOC	Noris holder	**£1.85**	1.31	1.05

Lumograph 2mm leads for above holders, sold in boxes of 12:

Code	Description	1-5	6-11	12+
S2002B	2B leads	**£3.85**	2.72	2.18
S200B	B leads	**£3.85**	2.72	2.18
S200HB	HB leads	**£3.85**	2.72	2.18
S200H	H leads	**£3.85**	2.72	2.18
S2002H	2H leads	**£3.85**	2.72	2.18

(Other degrees from EB to 9H available to order)

Lumochrom Coloured 2mm drawing leads for use on paper or film. Pack of 12 assorted colours

S204S12	12 colours	**£4.10**	2.91	2.33

(d) Ball point pens
Ventilated caps. Fine point.

Code	Description	1-9	10+	30+
S430F-9	Black	**16p**	0.11	0.09
S430F-2	Red	**16p**	0.11	0.09
S430F-5	Green	**16p**	0.11	0.09
S430F-3	Blue	**16p**	0.11	0.09

(e) Fibre Pens
Low cost fibre tipped pens - 0.8mm robust point, ventilated cap. Available in a range of colours:

Code	Description	1-9	10+	30+
S333-9	Black	**25p**	0.17	0.14
S333-2	Red	**25p**	0.17	0.14
S333-5	Green	**25p**	0.17	0.14
S333-3	Blue	**25p**	0.17	0.14
S333-1	Yellow	**25p**	0.17	0.14
S333-W1	Pack of 10 assorted colours	**£2.50**	1.70	1.40
S333-W2	Pack of 20 assorted colours	**£5.00**	3.40	2.80

(f) Graphic Liners
Pigment liner, multipurpose fibre tip pen. Fade proof black pigment ink. Excellent reproduction qualities. In 4 line widths:

Code	Description	1-9	10+	30+
S308-01	0.1mm liner	**£1.45**	1.02	0.82
S308-03	0.3mm liner	**£1.45**	1.02	0.82
S308-05	0.5mm liner	**£1.45**	1.02	0.82
S308-07	0.7mm liner	**£1.45**	1.02	0.82
S308WP4	Plastic wallet with one each of the above 4 pens	**£5.80**	4.11	3.29

(g) AV Pens & Markers
A range of high quality Lumocolour markers with permanent waterproof ink that will write on all smooth surfaces. Fadeproof. Ideal for OHP – available in 8 colours. Ventilated caps.

Fine Points 0.4mm

Code	Description	1-9	10+	30+
S318-9	Black	72p	0.51	0.41
S318-2	Red	72p	0.51	0.41
S318-5	Green	72p	0.51	0.41
S318-3	Blue	72p	0.51	0.41
S318-W8	Pack of 8; one each black, red, green, blue, yellow, brown, orange and purple	£5.76	4.10	3.30

Medium Points 0.8-1mm

S317-9	Black	72p	0.51	0.41
S317-2	Red	72p	0.51	0.41
S317-5	Green	72p	0.51	0.41
S317-3	Blue	72p	0.51	0.41
S317-W8	Pack of 8; one of each as S318-W8	£5.76	4.10	3.30

Broad Points 1-2.5mm

S314-9	Black	£1.00	0.71	0.57
S314-2	Red	£1.00	0.71	0.57
S314-5	Green	£1.00	0.71	0.57
S314-3	Blue	£1.00	0.71	0.57
S314-W8	Pack of 8; one of each as S318-W8	£8.00	5.67	4.54

(h) Highlighters
In 3 popular colours. Universal pigment ink, lightfast for all types of paper including fax, telex and carbonless copy paper. Chisel point.

Code	Description	1-9	10+	30+
S364-1	Yellow	£1.10	0.77	0.62
S364-23	Pink	£1.10	0.77	0.62
S364-5	Green	£1.10	0.77	0.62

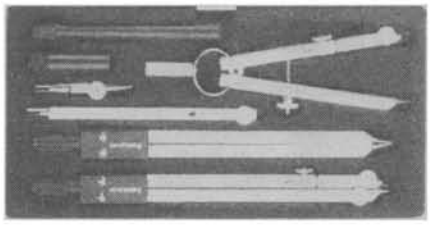
Marsmatic Techniset
S700C7 Compact desktop set with 2 slide out trays. Upper tray contains 3 Marsmatic 700 technical pens (0.25, 0.35, 0.5mm), 4 ink cartridges, an eraser, fineline pencil and tube of leads, and a compass attachment for technical pens. The lower tray is empty.
£29.30 5+ 20.79

Erasers

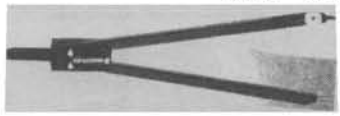
Code	Description	1-9	10+	30+
S526-B20	Rasoplast Soft white vinyl eraser 58x22x12mm	23p	0.16	0.13
S526BT30	Duoplast dual eraser. Removes ink and graphite	35p	0.25	0.20

S526-61 Rasor eraser pencil with brush **75p** 0.53 0.42

Drawing Sets
High quality student compass sets. The Arco range is sturdy and robust, and incorporates features normally only found on more professional models.



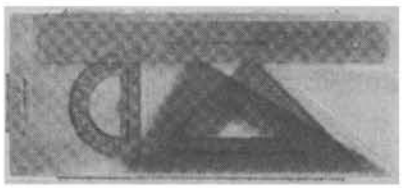
S559-09 Arco drawing set – compass, dividers, extn bar, springbow and lead box.
£9.95 5+ 6.66



S559-50 Low cost school compasses and lead box **£1.35** 10+ 0.96

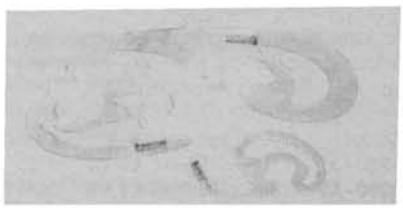
Rolling Ruler
Versatile instrument for drawing parallel lines both vertically and horizontally; drawing angles, circles, curves and arcs. Comes with full instructions.

Code	Description	1-9	10+	30+
S962-31	6" model	£4.50	3.19	2.55
S962-30	12" model	£6.25	4.43	3.55



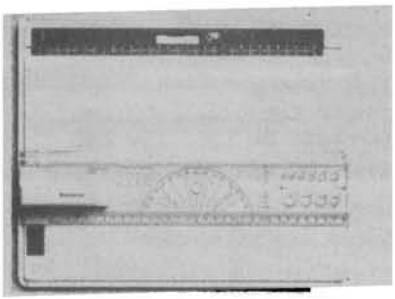
S569-22 Set of 45° and 60° set squares, 6" ruler and protractor **75p** 0.51 0.41

S971-12 Flexible Curve **£2.60** 1.92 1.63



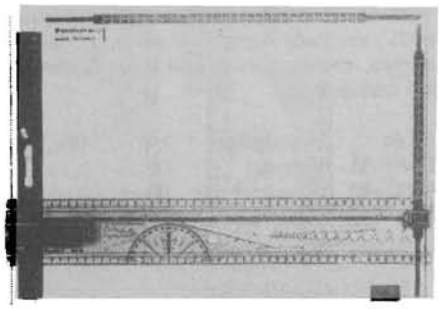
S571-40 French curve set – set of 3 in plastic wallet **£3.75** 2.66 2.13

Drawing Boards
Portable drawing boards suitable for student and technical draftsperson alike. Advanced features make these quality products excellent value for money. They are made of especially break resistant plastic



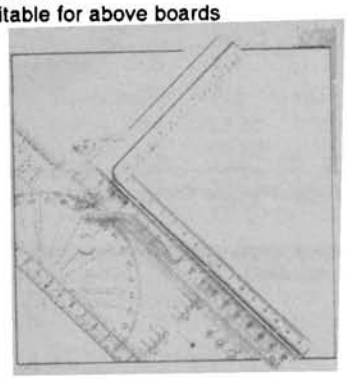
S661A4 DIN A4 size has perimeter guide grooves, a recessed sheet clamp with locking key, paper alignment edges and reduction scales. Fixmatic drafting arm has 2 guide grooves for a drafting head. **£24.95** 5+ 14.18

S661A3 DIN A3 size with fixmatic drafting arm **£34.95** 5+ 19.86

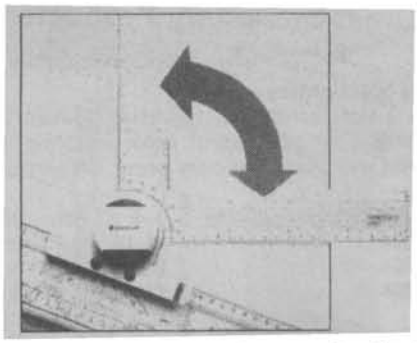


S660A3 DIN A3 Mars Technico drawing board with additional features a s shown for the professional. **£46.50** 5+ 26.38

Accessories
All suitable for above boards



S660-15 The quickmatic drafting head. Quickset angle can be set in the guide grooves and moved along the entire length of the drafting arm for hatching. Locks at 15° intervals. **£4.25** 5+ 3.62



S660-20 Variomatic drafting head – fits the guide grooves of the parallel drafting arm. It allows instant drawing of 30° angles, has opposing scales 0-90° and automatic locking at 15° intervals **£14.50** 5+ 8.23

Kuratake

A range of top quality supplies from a company established in 1902. Kuratake has been established in the UK for 5 years, providing graphic markers and equipment to education, industry and commerce.

Ceramic Rollerball Pen
The Zig ball 200 is a low cost high quality 0.3mm rollerball pen, available in 4 colours. Waterbased ink.

Code	Description	1+	12+	96+
KCB220K	Black	**70p**	0.43	0.34
KCB220R	Red	**70p**	0.43	0.34
KCB220G	Green	**70p**	0.43	0.34
KCB220B	Blue	**70p**	0.43	0.34

Textile Markers
Double ended pens to give a hard line (2mm) and a brush effect. Waterbased pigment ink exclusively for marking on cloth and fabric that once dry will not wash out. Available in a range of colours and packs as shown:

Code	Description	1+	12+	48+
KTC4000K	Black	**£2.23**	1.34	1.08
KTC4000R	Red	**£2.23**	1.34	1.08
KTC4000G	Green	**£2.23**	1.34	1.08
KTC4000B	Blue	**£2.23**	1.34	1.08
KTC4000Y	Yellow	**£2.23**	1.34	1.08
KTC4000A	Pack of 12 assorted colours: Black, Red, Green, Blue, Yellow, Brown, Orange, Violet, Grey, Pink, Light blue, Light Green.	**£16.92**	10.13	8.10

Gold & Silver Pen
Double ended pen 210mm long with valve action and fine tip – Gold one end, Silver the other. Instant drying, high opacity.

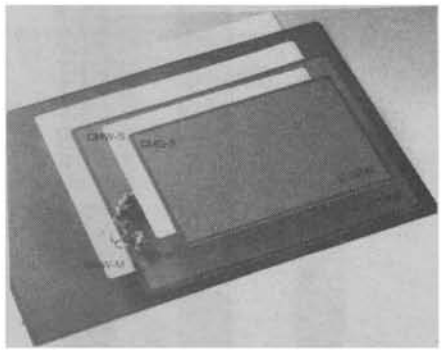
Code	Description	1+	12+	48+
KFMP20	Gold & Silver	**£3.80**	2.28	1.83

Whiteboard & Markers
A revolutionary new product – a flexible whiteboard! The Flexiwipe needs no fixing, just peel off backing sheet and smooth on to any non-absorbent surface. Easily removable for storage in tube supplied. Available in 3 sizes as shown:

Code	Description	1+	3+
FWA2P	A2 (594x420mm)	**£27.23**	15.73
FWA1P	A1(840x594mm)	**£55.46**	31.15
FW2M	2m x 930mm	**£126.12**	70.85

Markers for above and other whiiteboards. Alcohol based ink that simply wipes away when dry. Sold in packs of 4 bullet tipped markers – Black, Red, Green and Blue.

Code	Description	1+	12+	48+
KOMW35	Pack of 4 pens	**£4.51**	3.17	2.54

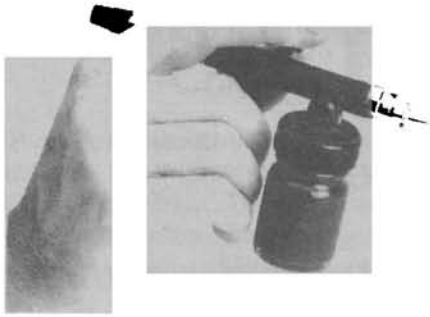


Cutting Mats
High quality double sided green cutting mats with high durability and elasticity. Self healing surface on both sides. Printed with a 2mm grid.

Code	Description	1+	12+
CMG/ES	220x300mm	**£7.47**	4.20
CMG/S	300x450mm	**£14.95**	8.40
CMG/M	450x600mm	**£29.68**	16.67

Changin' Glue
Instant adhesive for paper and card – on application the glue is blue, but dries clear. Non-toxic emulsion based. Can be used as permanent (stick while blue) or temporary (wait till clear – can be repositioned as required). Available in 2 sizes:

Code	Description	1+	12+	96+
KMSB15	10gm, 6mm tip	**£1.69**	1.02	0.81
KMSB30	25gm 15mm tip	**£3.37**	2.03	1.63



Airbrushes
The Humbrol range of airbrushes and spray guns is designed to offer both modellers and graphic artists an inexpensive introduction to this medium.

H30003 Modellers airbrush designed to give a cost effective method of applying paint. Features include adjustable air jet pattern, air volume and paint flow volume adjustments. The set includes an aerosol power pack and three additional storage jars. **£19.95** 3+ 13.58

H30006 Hobbicraft airbrush set. This offers greater precision and finer atomisation than the above model. It features a dual action control trigger, controlling both paint volume and airflow, with an additional air supply volume control for attachment to aerosol power packs. Included in this set are an aerosol power pack and three spare storage jars. **£46.50** 3+ 31.66

Aerosol Power Packs

H30201	Standard size	**£2.95**	12+ 2.00
H30202	Large size	**£4.99**	12+ 3.40

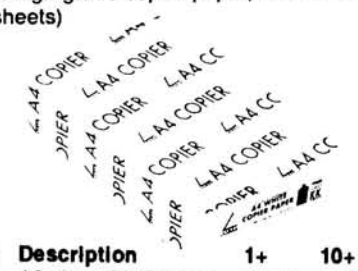
Transparent Film

OHP Film
Clear acetate film for overhead projection, also ideal for PCB layouts. Available in A4 size only, 0.1mm thick. Supplied in packs of 10 sheets

Code	Description	1-9	10+	30
S632-1021		**£1.60**	1.06	0.71

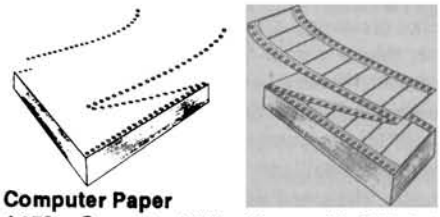
Other Stationary Products

(a) Paper & Labels
80gsm high grade copier paper, sold in reams (500 sheets)



Code	Description	1+	10+
A701	A3 size 420x297mm	**£9.95**	5.73
A702	A4 size 297x210mm	**£3.70**	2.31

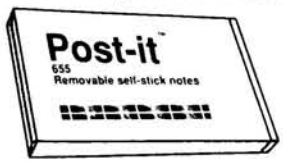
Laser Copier Paper
A high quality paper giving excellent results with all laser printers. Price per ream.
A703 A4 size 297x210mm **£4.50** 3.30



Computer Paper
A458 Computer Listing Paper 11x9½" plain. 60gsm wood free, microperf. Sold in cases of 2000 sheets. **£15.00** 11.06

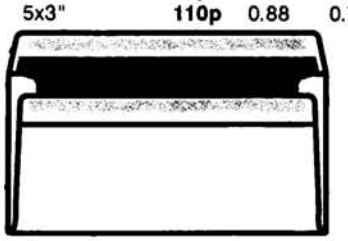
CL01 Continuous labels 3½x1.7/16". One label across sheet. Vertical spacing 0.2"
Pack of 1000 £6.95; 8000 32.00+VAT

CL02 Continuous labels 4x1.7/16". Three labels across sheet. Vertical spacing 0.2"
Pack of 1000 £6.95; 12000 51.00+VAT



3M Post-it notes.
The original removable self-stick notes, available in 3 sizes:

Code	Description	1+	12+	144+
S16	1½x2"	**36p**	0.28	0.23
S17	3x3"	**75p**	0.59	0.48
S18	5x3"	**110p**	0.88	0.70

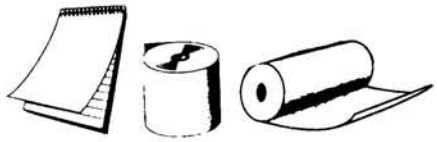


(b) Envelopes
White DL, size 220x110mm (takes A4 folded in 3) Self-seal. Sold in packs of 100

Code	Description	1+	10+
A711	80gsm opaqued, plain	**£2.00**	1.15
A712	80gsm opaqued, window	**£2.20**	1.29

Brown C4, size 325x230mm (takes A4 unfolded). Sold in packs of 100

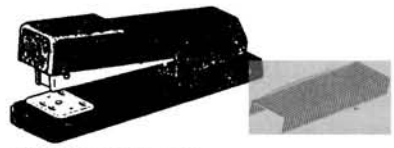
Code	Description	1+	10+
A716	80gsm gummed	**£4.20**	2.27
A717	80gsm self seal	**£4.60**	3.09



(c) Pads and Rolls
A721 Shorthand notepad, spiral bound 8x5". 80 sheets (160 pages)
1+ 40p; 12+ 0.22; 144+ 0.18

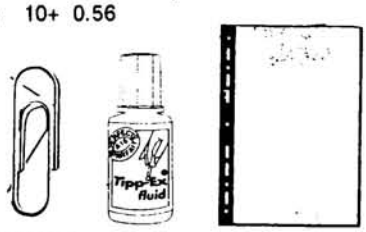
A725 Adding machine rolls. Standard 2¼x2¼". Sold in cases of 20 rolls.
1+ £4.75; 5+ 3.36 25+ 2.68

A721 Fax Roll. Standard for most makes of machine. 210mm wide x 30m long (equivalent to 100 A4 sheets) 12.5mm tube. **Reduced Price:**
£2.95; 12+ 1.80; 72+ 1.68.



Stapler and Staples
R2 Office 26/6 metal stapler in black.
£4.50; 10+ 3.43

R3 Office 26/6 staples in boxes of 5000
75p; 10+ 0.56



Paper Clips
R4 Large lipped in boxes of 1000
1 box £1.50; 10+ 0.86

Tippex
S7 The popular white opaquing fluid in 30ml bottles.
83p; 10+ 0.58

A4 Transparent Pockets
Open at the top and multipunched to fit most files.
Pack of 100 £4.40; 10+ 2.81

Adhesive Tape
A731 1" wide clar adhesive tape, polypropylene 30 micron
60p; 12+ 0.36; 72+ 0.29

A735 2" wide buff packaging tape, polypropylene 30 micron.
£1.30; 12+ 0.83; 36+ 0.66

Ballpoint Pens
Low cost ball pens with ventillated caps, in 3 popular colours:

Code	Description		
HPE01	Black	**10 for £1;**	100+ 0.06
HPE02	Blue	**10 for £1;**	100+ 0.06
HPE03	Red	**10 for £1;**	100+ 0.06
HPE50	Box of 50, any assortment		**£3.95**

ELECTRONICS BOOKS

Reference Tools written for you!

Three books from a well-known and best-selling electronics author!

The Laser Cookbook
Gordon McComb

A hands-on introduction to laser theory and operation, with over 80 practical and easy-to-follow projects. These projects range from simple acoustic modulation of laser beam to super-accurate interferometers that precisely measure the speed of light, light wave-lengths, and light frequencies. Readers wanting to increase their knowledge of this subject should look no further than "The Laser Cookbook". ***"...provides a fascinating tour through the world of lasers. It is well written, amply illustrated, and lots of fun."***

(Modern Electronics)

404 pages Size 190 x 235mm
ISBN: 0830693904 £18.15 (SC)

The Complete Shortwave Listener's Handbook, 3rd edition
Bennett

The bible of shortwave for over a decade, revised and updated for todays electronics market. It has been expanded to include all the very latest equipment, procedures, and operating practices. This book will be a useful reference for all those interested in shortwave radio. All the basics of SWL are covered - receivers, antennas, frequencies, radio-wave propagation, how to keep a logbook, and prepare and send reception reports. ***"...a comprehensive guide to the basics of shortwave listening."***

(New Technical Books)

294 pages Size 130 x 210mm
ISBN: 0830626557 £13.55 (SC)

Designing, Building and Testing Your Own Speaker System
Weems

For those who would like to be able to build a durable, low-cost speaker system that is as good as or better than the most expensive units on the market, now they can, with this completely revised edition of David Weem's best-selling book. There is no better source of clear, step-by-step construction techniques and project plans than Designing, Building and Testing Your Own Speaker System.

224 pages Size 190 x 235mm
ISBN: 083063374X £14.95 (SC)

The Robot Builders Bonanza
Gordon McComb

A collection of almost 100 tried and tested project modules that can be mixed and matched to create a range of intelligent and workable robot creatures. Clearly illustrated and fun to use, this is a must for electronics enthusiasts interested in the area of robots. The 99 different robot components described in this ingenious guide can be combined in an almost endless variety of intelligent and workable robots of all shapes, sizes, and abilities.

326 pages Size 190 x 235mm
ISBN: 0830628002 £14.45 (SC)

Compact Disc Player Maintenance and Repair Manual
Gordon McComb

Specific guidelines for maintaining and repairing more than 100 brands of CD players. Packed with quick and reliable answers to the problems of maintaining and repairing CD players, this illustrated do-it-yourself guide takes the apprehension out of first-time repairs. ***"A valuable accompaniment to a CD purchase...should be in the reference library of anyone who owns or is planning to own a CD player."***

(Midwest Book Review)

244 pages Size 190 x 235mm
ISBN: 0830627901 £11.95 (SC)

Solid-State Electronics Theory with Experiments
Sanfilippo

Pragmatic rather than mathematic in approach, this book is a comprehensive introduction to solid-state technology. There are a number of interesting projects at the end of each chapter which reinforce concepts and allow readers to experiment with the solid-state applications described in the text by actually building circuits. Careful attention is given to how to test solid-state devices and how to design circuits using them.

330 pages Size 130 x 210mm
ISBN: 0830629262 £16.30 (SC)

How to Build a Small Budget Recording Studio from Scratch - 2nd edition
Everest

This is an excellent book about small studios: how to build them and treat them acoustically, with emphasis on budget studios suited to the efficient day-to-day production of radio, audio-visual, film, and television recording. No special skills or training are required to use this book - it is of interest to anyone planning to build or remodel a small recording studio. The author has been involved with TV broadcasting since 1936.

295 pages Size 190 x 235mm
ISBN: 0830629661 £14.45 (SC)

The Encyclopedia of Electronic Circuits - Volumes 1 - 3
Graf

This fully comprehensive best-selling series includes coverage of all aspects of the electronics world. There are fascinating insights into schematics for the latest available alarm amd security circuits; smoke, moisture and metal detectors; computer, fiber optic and laser circuits; and hundreds of other areas.

Size 190 x 235mm
Volume 1 - 0830619380 £28.15 (SC) 760 pages
Volume 2 - 0830631380 £28.15 (SC) 732 pages
Volume 3 - 0830633480 £26.95 (SC) 837 pages

The GIANT Book of Easy-to-Build Electronic Projects
Editor of Elementary Electronics

Here's a giant collection of useful, low-cost electronic projects for both the beginner and experienced hobbyist. Ranging from simple circuits to state-of-the-art electronic gadgets, there are dozens of fascinating projects that simply aren't available elsewhere. There are construction and assembly details, and printed circuit board templates reproduced in actual size

352 pages Size 190 x 235mm
ISBN: 0830601996 £19.95 (HC)

Homemade Holograms: The Complete Guide to Inexpensive, Do-It-Yourself Holography
John Iovine

This is an ideal 'first-step' into the fascinating world of holograms. The author describes new procedures - using equipment readers can make themselves - that take the complexity out of producing simple white-light reflection and transmission holograms of people, as well as computer graphics, and solid objects.

230 pages Size 190 x 235mm
ISBN: 0830634606 £11.95 (SC)

500 Electronic IC Circuits with Practical Applications
Whitson

Comprehensive and detailed coverage of 500 electronic IC circuits. Electronics enthusiasts will value the easy-to-follow practical circuit applications and will learn from the basic theory behind each one. A handy tool for anyone working with IC circuits.

340 pages Size 190 x 235mm
ISBN: 0830629203 £19.05 (SC)

The Illustrated Dictionary of Electronics - 5th Edition
Turner

Featuring more than 27,000 entries, an exhaustive list of abbreviations, and appendices packed with schematic symbols and conversion tables, this is by far ***the*** most comprehensive dictionary of practical electronics and computer terms available today.

723 pages Size 190 x 235mm
ISBN: 0830633456 £23.95 (SC)

The Thyristor Book - With 49 Projects
Delton Horn

With this new collection of 49 projects, the author simply and clearly demystifies these useful components. He explains in simple terms thyristor construction and operation and uses dozens of designs to illustrate the many practical application of thyristors.

205 pages Size 190 x 235mm
ISBN: 0830633073 £16.95 (SC)

Physics for Kids: 49 Easy Experiments with Electricity and Magnetism
Robert Wood

An outstanding guide for young scientists to the phenomena of electricity and magnetism. There are exciting experiments such as: tracing a magnetic field with a bar magnet, tracing lines of force with a compass, making a battery, making a motor, and many more.

125 pages Size 190 x 235mm
ISBN: 0830634126 £9.95 (SC)

Homemade Lightning: Classical Experiments in Electrostatics
R A Ford

The electronics ethusiast's guide to designing, building, and using classic high-voltage generators and associated equipment. There is a fascinating collection of experiments that reveal the wide-ranging impact of electrostatics on such topics as motor design, aerodynamics, gravity, photography, and meteorology.

194 pages Size 190 x 235mm
ISBN: 0830635796 £11.95 (SC)

Babani Books

2 new titles from this popular publisher:

A REFERENCE GUIDE TO BASIC ELECTRONIC TERMS BP286
£5.95 F.A.WILSON

Over 700 fundamental terms explained in depth and backed up by a list of other relevant entries. Published in the popular larger format, this useful tome should be on every enthusiasts bookshelf.

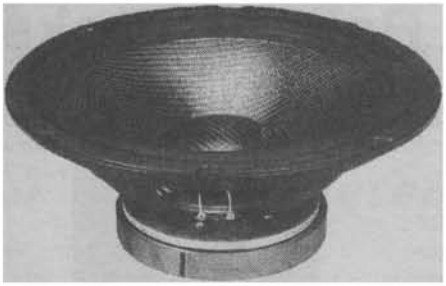
0 85934 231 X 1992 198x135mm 480pages

INTERFACING PC's AND COMPATIBLES BP272
£3.95 R.A.PENFOLD

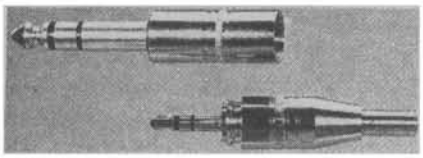
Utilizing the expansion slots for do-it-yourself projects is quite straightforward, and this book gives you detailed descriptions of the relevant parts of the PC. There are practical circuits for a number of projects including address decoder, simple TTL 8 bit input and output ports, 8255 PIA, D-A annd A-D converter circuits etc. In fact, all you need in order to produce successful PC add-ons.

0 85934 217 4 1992 178x111mm 120 pages

If you like what you see in this supplement make sure you don't miss future bargains - only £2 (UK/ BFPO; £4 O'seas) for the next 6 issues - see order form for details.



LS037B – Great offer on 12" bass speaker! High efficiency woofer with rubber surround – wii handle 150W music power. Freq. response 20–3500Hz. Magnet weight 100oz, Overall weight 4.4kg. 8R impedance. Normally cost over £60 – **Our Offer Price £75 per pair**



F217G Metal stereo combination plug assembly. 3.5mm plug with metal spring outlet with adaptor togive 6.35mm plug. Assembly screws together to give compact solid unit. Would normally sell for over £1.00 each – **Our Low Price 2 for £1.00;** 100+ 0.25

FANTASY DECO ROPE

FDRI 9 meter long tube with 120 lights and special effects controller and power supply. Uses cool and long lasting LED's. 8 different programs on controller - chasing back and forwards at various rates. **£49.95**

SUPER HEADPHONE DEAL!

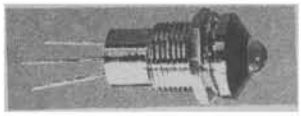
H8 Excellent quality Adastra stereo headphones with boom microphone. Freq. response 20-20,000Hz, 32R impedance. Microphone 600R. 2m leads fitted with 3.5mm plug for mic, and 3.5 mm plug +adaptor for headphones. Padded earpieces and leatherette headband.
ONLY £9.95

QUICKSHOT MOUSE

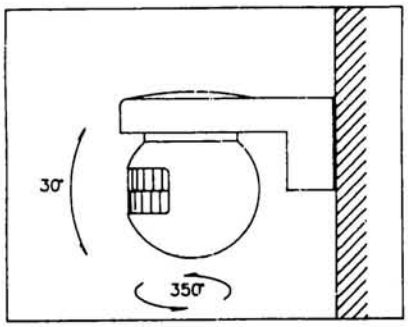
High quality optomechanical mouse by Bondwell
* Microsoft compatible
* IBM PC XT or AT compatible
* Hardware selectable mouse standard
* Programmable resolution 29-1450 DPI
* High tracking speed 500 mm/s
* Silcone rubber coated tracking ball

Includes
* Universal mouse driver
* Performance Test Programme
* D9-D25 connector adaptor

ORDER CODE QS158
PRICE £24.95 6+ 16.10



TRICOLOUR LED BARGAIN
F166T Chrome holder needs 10mm hole. LED has 3 leads – common, red and green, when used together produce yellow. These normally sell for around 80p each – Our special offer price **4 for £1.00;** 100+ 0.12; 1000+ 0.09



SECURITY SENSOR

BPW1 Outdoor light control motion sensor. This automatic sensor is powered from the mains and will handle up to 1000watts. It has 110° elliptical view field, 9 meters on each side and 12m forward. Automatic turn on and off of lights.

Features:

Security – instantly reacts to intruders by turning light on

Sensing motion, turns on/off lights automatically in daylight

Adjustable light sensitivity and shut off time

Manual override

Easy installation

For both incandescent and fluorescent lights.

Ideal for outdoor areas:

Front or back porch
Deck or patio
Secluded walkway
Garage and driveway
Cluttered areas

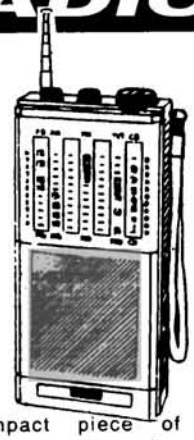
The globe shape makes adjustment exceptionally simple – just rotate to direction and angle required.. Overall size 110mmx100x75mm.
Price: £29.95 5+ 21.30

D90 TDK low noise high output cassette tape, normal bias **£1.20** 10+ 0.80

Goods sent in error

We have received a batch of leads which are not normally stocked - so we'd like to clear them at a Bargain Price!
Z5273 AV lead - 4 pin mini DIN plug both ends. 2m long **£1.95**

MULTIBAND RADIOS!

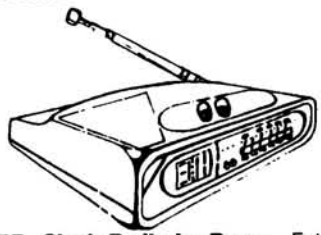


This compact piece of equipment 200 × 95 × 50mm comes in an attractive metallic grey case with controls on top - timing, on/off and volume, squelch. The telescopic aerial extends to 500mm and can be rotated in any direction. The 3 wavebands are:

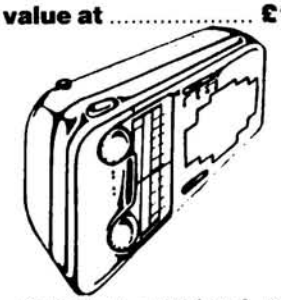
1) CB, channels, 1-80
2) TV1 54-87 MHz & FM 88-108 MHz
3) AIR 108-145 MHz & PB 145-176 MHz.

The large 3" full range speaker delivers 280mW of undistorted power. There is an earphone jack and DC adaptor jack. The unit is powered by 4 × AA cells. All this technology for just **£17.95**

Order Code **MB100**



Z4357 Clock Radio by Ross. Extremely neat unit measuring 140 × 80 × 35mm. MW/FM bands, telescopic aerial, stand, carrying pouch and strap. Clock has LCD display and can be used in 12 or 24 hr mode. Alarm. Light. Earphone socket. Takes 2 × AA cells.
Great value at **£13.95**



Z8891 Superb 4 waveband radio by Ross, model RR5. Covers FM 88-108MHz, MW 518-1610kHz, LW 150-275kHz SW 5.7-18.1MHz (16.5-52.6m). Nicely styled case measuring 210 × 145 × 70mm with clear scale markings. Telescopic aerial, headphone socket. Volume, tone and tuning controls. ON/ OFF switch/ waveband selector switch and AFC switch. Mains/ battery. (Takes 4 × C cells). Originally retailed at £19.95
Our Price **£14.95**

BARGAIN LIST 78

March 1992

Greenweld Electronics Ltd
27 Park Road
Southampton
SO1 3TB

Tel (0703) 236363
Fax (0703) 236307

The next few pages feature goods that have arrived recently - some are available only in small quantities, so don't delay, order today!!

Changes to Bargain Lists.

We're making a few improvements to our Bargain Lists to make them even more interesting reading!
Quite soon, you'll find included a few circuit ideas for the surplus parts we sell - maybe even a complete project or two. We know our customers' range of knowledge, ability and interests is extremely varied - from the novice who has problems identifying a resistor to eminently qualified experts engaged in design and research of leading edge technology - so we'll try and include a wide variety of ideas. Contributions are welcome, and any published will be paid for.
We're aware that some of our surplus comes without any information, and that this can be very frustrating, but the cost reflects this - the quantities involved are usually too small to justify chasing data. In future, those items that do include data will have a 'D' suffix to the Z number: i.e. **Z8963D.** If the info runs to several pages, there will be a seperate charge quoted.
Data can be supplied seperately at 20p per item + SAE if not ordering any goods

SWITCHES

The parts listed below have come from a manufacturer of aids for the physically handicapped. There's a lot more hardware to sort out, but below is a selection from this parcel. As you would expect, there are quite a few switches and relays:

(a) Microswitches

Z2486 Burgess type V12K 41x14x18mm, short lever SPCO, probably 15A rating. 2 for £1.00.

Z2487 Honeywell heavy duty with brass screw terminals and brass threaded plunger. SPCO rated 15A 380V ac. **£1.50**

Z2488 Std 5A microswitch with roller lever on steel bracket with steel plunger. **£1.20**

Z2489 Std 5A microswitch with plastic assembly enabling operation by blowing down tube. **£1.50**

Z2490 2 std 5A microswitches on plastic bracket with lever arrangement. Operate each switch by blowing or sucking. **£3.50**

(b) Other Switches

Z2491 Single pole heavy duty push switch with screw terminals made by Burgess, type KB5-A2 **2 for £1.00;** 100+ 0.30

Z2492 The above switch mounted in a plstic box 49x54x18mm with plunger assembly **£1.60**

Z2493 Very large light action rocker switch, SPCO. Lever is 43mm square. Clip fix mounting. **£2.00**

Z2494 Celing switch with pull cord DP on/off rated 30A 250V ac. Red bezel, but no neon fitted. **£2.50**

Z5258 Air operated indicator(?) Plastic box 83x40x34mm with rocker type top. 2m length of twin tubing - and by blowing or sucking the rocker moves. **£2.50**

Z5259 Twin version of above **£3.50**

Z5260 AEG LS07 contactor rated 600V 16A. 4 pole and subsidary circuit **£3.50.**

Z2495 Small suppressor 28mm long x 12mm dia by LCR. Rated 250V ac **2 for £1.00**

Z2498 Unimax high quality illuminated push switch, DP contacts. Needs 16mm dia fixing hole and takes wedge lamps. Available with green **(Z2498G)**, orange **(Z2498R)** or black **(Z2498B)** bezel. **£1.00**

Z8970 Lift control panel. Self contained metal box 265x90x60mm with fascia plate 292x100mm and 5 heavy duty double pole push switches fitted with 12V MBC lamps inside. **£15.00**

Z2387 PC mounting push switch - 1 pr make and 1 pr break contracts. Right angle plunger is 5mm long x 2mm dia. With protective cover. Again, very high quality. **2 for £1.00**

Z2499 Neat limit switch with lever and microswitch action, 1 pr make and 1 pr break contacts. 18.5 x 10 x 7.8mm. Lever is 30mm long. **4 for £1.00** 100+ 0.14 1000+ 0.10

Z2485 PCB mntg keyboard click switch, low profile, only 3.8mm thick. 10mm sq. SP make. **12 for £1;** 100+ 0.04

K591 Pack of 25 miniature toggle switches from page 125 of the 1991 catalogue **£4.00**

K592 Pack of 25 miniature rocker and lever switches from page 125 of the 1991 catalogue **£4.00**

K593 Pack of 25 push and slide switches from page 125 of the 1991 catalogue **£3.50**

FUSES

Thermal Fuse Offer

A job lot of thermal fuses allows us to offer these at much less than our normal selling price (60p each). Available in the following values:

Z2525 104°C short leads - 12.5mm long. **5 for £1.00** 100+ 0.10

Z2526 109°C full length leads. **3 for £1.00;** 100+ 0.15

Z2527 121°C one lead cut to 17mm. **4 for £1.00;** 100+ 0.12

Z2528 152°C full length leads **3 for £1.00;** 100+ 0.15

K834 Pack of 20 assorted thermal fuses (4 values), some with cropped leads. **£2.95**

Thermal circuit breakers. Voltage rating 32V dc, 250V ac. Right angle PCB mounting with manual off/reset button and aux contact. Size 20x6x10. DP 4.33
Z5191 2A rating **£1.00** 100+ 0.40
Z5192 3A rating **£1.00** 100+ 0.40

Z439 Wire ended fuse. 20mm 1.5A antisurge. **Pack of 20 £1.00**

Z2440 Miniature circuit breaker (MCB) rated 250V ac 1.5A. Size 51x40x19mm. Made by Heinemann. **Only £2.00**

Z2444 Protector 14A. This surge arrestor made by Beswickis designed to protect equipment from voltage surges. DP 5.27. Our prices: **£1.00 each,** 100+ 0.60, 1k+ 0.40

Z8962 8 way industrial fusebank, 32A 415V ac. Totally shrouded incoming terminal will accept conductors up to 120mm². DP(1987) 30.55. **Our clearance price £10.00**

HARDWARE

More Hardware - seems to be very popular, especially the smaller sizes for modelmakers. However, most of this lot is a bit on the large side - you don't really need M16 nuts to hold bit of veroboard in a case!!

K830 M8 screws/bolts. Good assortment from 16-90mm long c/s, hex, pozi, some hi-tensile. All steel! **Pack of 50** £3.80.

K831 M10 Bolts - mostly high tensile hex head , lengths from 16-90mm. **Pack of 20** £3.20

K832 M12 Bolts-mostly high tensile hex head, lengths from 40-150mm. **Pack of 10 £ 2.40**

K833 M6 pack. Excellent value - contains screws in various lengths and head. Mostly steel, some hi-tensile. **Pack of 100 £4.50**

K553 2BA screws - c/s, cheese, hex, pan heads, slot and pozi in lengths from 7-63mm. **Pack of 100 £2.60.**

Z7001 M16 Full nut-you really shouldn't be with out some of these! **Pack of 12 £1.00.**

Z7002 Threaded hoop overall length 490mm. Ends are threaded. M10 to a length of 75mm. They are 125 mm apart. **Pack of 3 for £1.00**

Z7003 M18 nut and hex bolt 30mm long. **3 pairs £1.00**

Z7004 M10 Masonry anchor. Drill 12.5 mm hole 40mm deep and insert. Use M10 screw to force anchor into brickwork. **Pack of 8 £1.00**

Z7005 Screw and nut pack- 1/4 " Whit: 25 each of 38mm C/S, 25mm C/S, 63mm (threaded 14mm) hex bolts and 25 mm (threaded 14mm) hex bolts +100 steel nuts. **Pack of 200 parts** £5.00

Z7006 Supertwin tufscrew, 8x1.25" combination pozi/straight pan head. Zinc plated. Great as woodscrews. **Boxes of 250 £3.00**

Z7007 M3 x 50 mm csk pozi steel screws. **Boxes of 250 £4**.00

Z9029 M4 x 50mm pan head pozi steel screws **50/£1.00; box of 200 £3.00**

Z9030 M6 x 50mm csk slot steel screws **16/£1.00; box of 100 £3.00**

Z9031 M8 x 60mm (23mm threaded hex head steel bolt **8/£1.00; box of 200 £12.00**

Z9032 M10 x 35mm hex head bolt HT steel **8/£1.00; box of 100 £6.00**

Z9033 M10 x 90mm hex head bolt HT steel **4/£1.00; box of 100 £12.00**

Z2373 M16 Full nuts, steel - **pack of 6 £1.00**

Z2374 M16 Half nuts, steel - **pack of 8 £1.00**

Z2371 5/16"x1" UNC hex head bolts. **A pack of 10 costs £1.00**

Z2372 3/8 x 1.25" set screws, hex head, **pack of 6 for £1.00**

Z2365 M6x16 Hex head set screws, pack of 25 for £1. **Box of 200 is £4.00**

Z2366 M6x1/4 as above. **Pack of 50 for £1.00**

Z2367 5/8" UNC half nut, **pack of 10 £1.00**

Z2368 5/8" UNC thin nut, **pack of 20 £1.50**

Z2369 1/4"x1.5" UNF hex head high tensile steel screws, **Pack of 25 for £1.50**. Box of 200, £8.50

Z2370 1/2"x1/2" as above, **pack of 10 for £2 or a box of 50 for £8**

K552 4BA Screw mix **200 £2.75**

K812 M6 Screw mix **100 for £2.50**

K596 Pack of 200 assorted nuts, believed to be all BA , from 2BA to 8BA. Mostly steel. **£2.40**

K595 Big mix of screws - very few BA, mostly metric, BSF, Whitworth, DZU etc. Tremendous variety of heads - cheese, cs, pan, hex, allan, round etc, etc. As for size, well we've seen some as small as 3mm and a few as long a s 80mm. There's even some 12.5mm dia in this pack! You'll probably also find a few odd clips, washers, nuts etc, too. 500gm pack **£2.70**

K812 Pack of 100 assorted rivets **£1.80**

K813 Pack of 100 self tapping screws, sizes 4-8, lengths to 20mm most with pozi head **£1.50**

Z2378 T03 Silicone impregnated insulated washers. **Pack of 25, £1.00**

Z5175 High quality heavy duty ball type castor 63mm dia, chromed steel with brass insert with 9.3mm threaded insert. DP 6.25 **Our price £4.00**

Z5176 Smaller brown ball type castor 50mm dia made by Kenrick. Stel insert with 8mm threaded insert. DP 3.15 **Our price £2.50**

Z2429 Black plastic foot 19mm dia x 5mm thick with 4.5mm dia hole. **Pack of 20 £1.00** 100+ .03

Z2375 High quality Sifam 1/4" collet knob S150, 15.5 dia x 14 high black knob, cap, and nut cover. **Pack of 10 of each £4.20**

Z5269 Olivetti cartridge ribbon - correctable carbon type 16.5mm wide x 120mm long, lexicart 90/92 Type No. 568N **£1.00 each**

Z5270 Black nylon ribbon type NCR 499 12.4 mm wide by Caribonum. Box of 4 **£2.00**

Z2502 Olivetti Summa Add ribbon. Twin spools, black **£1.00.**

Z23154 Nylon printer ribbon type N465, ref KSR430. Boxed. **£1.50**

NEWSLINE weekly update on new stock. Call 0891 505121 (48p per min. peak 34p off peak)

Z2437 Nylon stand off 2.5mm high. OD 5.8mm ID 3.2mm. **Pack of 1000 £3.00**

Z2438 White plastic oblong stand off (for 7 seg LED's) 19.5x10.2x12.2mm high. **Pack of 100 £2.00**

Z5261 Orange ABS case by boss, type 2002. 100x50x25mm. Threaded brass inserts and PC slots. 2 BIMdaptors included. DP 1.56. **Our price 80p**

Z9028 Strong compression spring 125mm long x 31mm dia. **£1.00**

Z2431 Compression spring 62mm long x 12 mm dia. **Pack of 6 £1.00**

Z5177 Self adhesive grey cable clip 38mm long. Will take up to 6mm dia cable. DP 3.48. **Pack of 20 £1.00** 10+ packs 0.60

Z2391 Cable gland in black nylon for 8-13mm dia cable. **Pack of 5 £1.50**

Z2392 As above best for 7-10.5mm cable. **Pack of 5 (DP 2.22) £1.20**

Z5152 Plastic Bits. 100 assorted stand offs etc. **£1.00**

Z635 Digital multimeter case DP2010, 110x80x20mm with cut outs for switches and terminals. Aluminium fascia plate. **2 for £1.00**

Z343 Ceramic insulating beads. **Pack of 100 £1.00**

Z1669 Veropins, wirewrap 18-0226. **Pack of 500 £2.00**

Z2443 TO3 heatsink - bolts on top of transistor using same fixing screws. Diecast ally 25x41x27mm. 7.3°C/W.DP 1.93. **Our price 75p**

Z2381 Small heatsink, 25 x 7 x 6mm, for sticking on top of DIL IC's. **Pack of 5 £1.00**

INSTRUMENT CASE

Z8969 Superb heavy duty steel instrument case finished in light grey 426x290x78mm with 4 plastic screw on feet. This was an Isolan repeater for use on a data network, and although the contents have been removed (before being used), the front and back panel remain, the former having 4 oblong red LED's and the latter a fused, suppressed IEC mains inlet, on/off DP rocker switch and 2 x 15 way D sockets joined to 16 way IDC skts with a short length of ribbon cable. Ther's a 60mm circular cut-out for a speaker on one side and mounting pillars in the base. Just look around and see the price this type of high quality case normally costs! - somewhere around the £30-£40 mark - then compare it to our low, low price - **just £9.95**

SEMICONDUCTORS

MICROPROCESSOR CHIPS

P8035AHL Intel 8 bit CPU, 11MHz **Our Price £3.00**

8051AH Phillips 8 bit CPU **Our Price £1.00**

M80C31F OKI 8 bit CPU 16MHz **Our Price £2.00**

N8097-90 Intel 16 bit H-MOS CPU 12MHz PLCC 68 pin. DP 13.86. **Our Price £6.00**

R80C186-12 Intel 16 bit CMOS CPU. 12MHz clock. PLCC 64 pin. DP 28.37 **Our Price £12.00**

CP82C59A CMOS programmable interrupt controller. DP 3.00 **Our Price £1.50**

P8256AH UART. DP 7.00 **Our Price £2.50**

Z2507 L4962 1.5A switching regulator, 16DIL. 5.1-40V. DP 2.50 **Our Price £1.50**

Z2513 L4960 2.5A switching regulator, 7 pin TO220. 5.1-40V. DP 2.64 **Our Price £1.80**

Z2508 LF13331 quad SPST J-FET analogue switch. 16DIL. DP 7.58 **Our Price £3.00**

Z2509 OPA27 low noise precision op-amp 8DIL. DP 1.86 **Our Price £1.00**

Z2510 SL670C gain controlled pre-amp. 8DIL DP 2.31 **Our Price £1.50**

Z2511 TCA785 16DIL chip by Siemens **£1.50**

Z2512 LF398N sample and hold amp 8DIL. DP 2.64 **Our Price £1.50**

Z2514 ZTX751 PNP TO92 transistor rated 80V, 2A, 1W. DP 0.48 **Our Price 5 for £1.00;** 100+ 0.14; 1k+ 0.10

Z2524 2N3703 PNP TO92 transistor rated 50V 0.2A 360mW. Our normal price is 12p. Surplus stock offered at **15 for £1.00;** 100+ 0.04; 1k+ 0.025

Few SGS Chips:
Z2481 M491BB1 List 11.10. **Our price £4.50**
Z2482 M293B1 List 7.40. **Our price £3.00**
and an ITT chip:
Z2483 SAA1293-02 List 7.64. **Our price £3.00**

Z2484 2N3903 TO92 transistor. **12 for £1.00;** 100+ 0.04

Z2112 Ceramic filter 5.5MHz by Murata. **5 for £1.00**

Z2515 VN2410L TO92 N-channel MOSFET. 1A 0.4W. DP 1.08 **Our Price 3 for £1.00;** 100+ 0.18; 1k+ 0.14

Z2516 AD517JH TO99 converter **£3.00**

Z2517 LM350K steel variable voltage regulator, 1.2 to 33V at 3A. DP 7.20 **Our Price £3.50**

Z2523 TICP106D TO92 SCR rated 400V 100mA. DP 0.56. **Our Price 6 for £!.00;** 100+ 0.09; 1k+ 0.06

Z2518 BYT13-1000 fast recovery diode rated 3A 1000V. Plastic body, axial leads. DP 0.35 **Our Price 5 for £1.00;** 100+0.13; 1k+ 0.09

Z2519 AD667JN 28DIL D/A converter, 12 bit uP compatible. Extremely flexible. DP £28.18 **Our Price £10.00**

Z2520 SN75372 8 pin dual MOSFET driver. DP 1.74 **Our Price £1.00**

Z2521 Crystal, HC60 20.000MHz. **Only 50p** 100+ 0.25

Z2522 Watch crystal 32.768kHz, case 2.7mm dia x 8mm. **Pack of 3 £1.00** 100+ 0.15

OPTO

Z2498 Toshiba TLC501 LCD. 24 x 2 line display with standard connexions (supplied). V. similar to our **Z2171 £9.95**

A couple of small matching rectangular LED's, 3.8 x 1.75 mm :
Z2500 Green **Pack of 12 £1** 100+ .05 1k+ .04
Z2501 Red **Pack of 12 £1** 100+ .05 1k+ .04

Z2505 HCPL2531 dual optocoupler, 7% CTR. DP 3.52 **Our Price £1.00**

Z2506 HCPL2630 dual optically coupled high speed logic gate. DP 5.24 **Our price £2.00**

Z1935 LED clip for right angle mounting to PC board. Plastic holder for 5mm LED has 2.3mm dia spigot. Great value at **40 for £1.00;** 1000+ 0.015

PANELS

Z5264 Handy black plastic panel 102 x 22mm with 5 pin 180° DIN skt, 2 phono skts and a single wire aerial/earth socket. Pack of 10 £1.00 100+ 0.05 1K+ 0.035

Z5263 Panel 80x60mm with FPT100A phototransistor, LM324 quad op amp, 24v SPCO heavy duty relay, BC546, diodes, R's and C 's, Smashing little board - **only £1.00**

Z5262 Panel in the Z5089 etc. series as listed in main Bargain List. This one has 8 x 2764 in sockets + 10 74LS chips. **Only £4.00**

Z2529 Thick film circuit - small PCB 51x12mm with 13 surface mount transistors. R's are etched into substrate. **Pack of 5 £1.00**

Z4252 Seat belt alarm kit. Just a few of these remaining at **£3 each**

Z5271 Some more Currah Microspeech returns, for the Spectrum. No tape or handbook, sold for spare parts only. The 67 x 65 x 18 mm case has a 28w edge socket, phono lead, 3.5 mm jack plug lead and phono socket. Inside is 78MO5 reg, SP0256 speech chip and 2 support chips, trimming cap. transistor etc **Only £1.50 each to clear.**

Z5272 PCB 71x64 with SP0256 speech chip , 2 support chips and few other bits and 5 pin DIN plug. 22way edge connecter. These are returns and may be faulty - **but they** are only 50p each!!

SOFTWARE

COMMS SOFTWARE
A few odds and ends delivered with a parcel. As far as we can see, all are new and complete as described below:

Z6003 Multicom - handbook + 5.25" disk for Epson QX10/4.1A

Z6004 Multicom - handbook + 3,5" disk for Apricot PC/XI 4.24

Z6005 Multicom + handbook + 3.5" disk version 4.16

Z6006 Vicom - handbook + 5.25" disk for Apple

Z6007 Sage Chit-Chat - Handbook + 3.5" disk for Apricot V2.2

Z6008 Dial-Up Educational - handbook + 5.25" disk + dongle for RML480Z

Z6010 Dial-Up Educational - handbook + 5.25" disk for RML Nimbus

Z6011 Dial-Up Personal - handbook + 5.25" 80 track disk for BBC B, B+ & Master

Z6013 Dial up Personal - handbook + 3" disk for Amstrad PCW

All the above are at the same price - now reduced to just **£10.00 each** - please give 2nd/3rd choice as numbers are very limited.

Z4266 Software tape for Spectrum - "Mountains of Ket". Returns - may not work. **4 for £1.00**

SOUNDERS

Z2376 Sub-min buzzer 12 dia x 8mm high. PC mounting by Star QMB111P. **Only £1.00**

Z2377 Star CMB 6V buzzer 22.5 x 15.8 x 14.4 mm. PCB mounting. High quality, low cost - **only £1.00**

Z1771 Sounder QMB06 by Star. **3 for £1.00**

CONNECTORS

Z042 2 pin DIN speaker sockets, PC mntg. **Pack of 25 £1.20**

Z4350 A set of 3 different pairs of test leads, offering great value! – a) 67mm long, 2mm probes both ends; b) 110mm long, 2mm probes one end, 4mm plugs the other; and c) 90mm long silicon rubber, 2mm probes one end, shrouded 3mm sockets the other. All are red and black pairs. **All three for just £2.00**

Z739 40 way DIL header plug, gold plated. **3 for £1.00**

Z1485 RC4200-8S 8 way gold plated socket – matches McMurdo red range, but blue **£1.50**

Edge Connectors

Z1828 31 way double sided 0.1" pitch gold plated PC mntg **£1.00**

Z1668 38 way single sided 0.1" pitch solder tags. **40p**

Z5117 19 way single sided 0.1" pitch – takes flexible wiring and locks into place. Sample free. **20/£1.00;** 100+ 0.03; 1k+ 0.02

Z2504 PS2 Keyboard adaptor 6 pin mini -DIN plug to 5 pin 180° socket. Carded. **£2.00**

Z2504 Useful battery holder - 3AA side by side with lead and attached. Supplied with double sided sticky pad. Bagged. **25p**

Z5265 9 way ribbon cable just under 1m long with 10 pin DIL plug (0.1 pitch) one end and 9 way header skt the other. Pack of 10 leads £2.00

SURFACE MOUNT

SURFACE MOUNT SURPRISE !!

A parcel of 650,000 devices has been purchased and reveals a wide selection of mainly transistors and resistors. We're selling this in a variety of packs as described below :

KS102 Transistors – about a dozen different types plus a few diodes, mostly SOT23. Type numbers include BCF29/30, BSR15, BC856, BCV71, BCW29/71/72/81. Supplied with code sheet. **Pack of 100 for £3.00**

KS103 Resistors. 0.125W 2% in a range of values from 3R3 to 10M. Although there is a fair range (about 50 values), many are E24. **Pack of 1000 for £3.00.**

ALSO AVAILABLE INDIVIDUALLY ARE THE FOLLOWING PARTS:

Type	Mark	P/N	Equiv	Vceo	Ic	£1 pk	100+	1k+
BC856	3AR	P	BC556			15	.03	.02
BCF29R	C77					15	.03	.02
BCF30R	C9	P	BC559			12	.04	.03
BCV71	K7	N	BC546A	60	0.1	15	.03	.02
BCW29R	C4,	P	BC558A	20	0.1	15	.03	.02
BCW71R	K1,4	N	BC547A	45	0.1	15	.03	.02
BCW72R	K5	N	BC547B			15	.03	.02
BCW81R	K31	N	BC547C			15	.03	.02
BSR15R	T71	P	2N2907			12	.04	.03

(b) Diodes

BZX84 – C18V(Y6) 18V 350mW zener. **Pack of 10 for £1.00.** 100+ .05 1k+ .03

RESISTORS

Z320 1 Watt wirewound pots – 2 additional values, 250R and 1k.

Z761 0R056 wirewound resistors 10% type HWR21. 0.5W **10 for £1.00**

Z1983 Thermistor, pack of 20, type VA1040. **£2.00**

Z414 30M 10% resistors. **Pack of 10 £1.00** 100+ .06

K446 Bourns mini cermet trimpot type 3362. 200R. **3 for £1.00**

SIL networks in original packing. 9 pin, 8 resistors. DP 38p. Available in these values, all the same price: **Pack of 10 £1.00;** 100+ .05; 1k + .04

Z5195 330R
Z5196 10k
Z5197 47k

Z2394 TO5 case cermet trimpots type 81E. Value 50R. **Pack of 6 £1.00.** Plastic case of 50 £4.00. 10+ cases £3.00

Z2359 miniature pot 17mm diameter with 6.75mm bush and splined spindle, PC mounting. 1k lin. **Pack of 4 for £1.00.**

Z2388 Plastic stand-off for 3/4" trimpots (our 75CER type) **Pack of 50 £1.00**

Z5208 PR52 2.5W wirewound resistors, 10k. **In boxes of 500 £5.00**

Z5209 As above but 1k2. **Box of 500 £5.00**

Some more Diplohmatic trimmers, to go with those on page 35 of B/L75

Type156 (like 146)
Values available:
200R 500R 10k 20k 50k 100k 500k 2M
Prices (any mix) 1+ 56p 100+ 0.28

Type 382
Value available: 500R
Price 1+ 44p 100+ 0.22

382

Type 386:(like 383)
Values available:
1k 10k 50k 100k
Prices: 1+ 44p 100+ 0.22

386

Z2447 Siemens dual thermistor type P6350. **Pack of 10 £1.00** 100+ 0.05

POWER SUPPLY CAPACITORS

Incredible value - these two jumbo electrolytics are offered at a fraction of their normal price!! Screw top cans made by Siemens, type B41455

Z5146 10,000µF 100V 105x64mm dia **£4.00; Box of 20 £60.00;** 100+ 2.00; 1k+ 1.70

Z5147 4700µF 100V 105x51mm dia **£3.00; Box of 35 £70.00;** 100+ 1.50; 1k+ 1.20

STOP PRESS -STOP PRESS-STOP PRESS-STOP PRESS-STOP PRESS

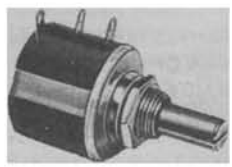
Z5292D 'Power one' power supply. Conventional unit, 120/240V input, output 15V @ 1.5A fully stabilized. Part enclosed size 123x102x54mm. Comprehensive data supplied **£10.00**

Z5293D 'Power One' power supply. Conventional unit, 120/240V input, outputs +5V @ 2A; + or –12V @ 0.4A; –5V @ 0.4A. Each output uses a 723 regulator and has a preset for adjusting voltage. With data **£14.50**

Z5289 Push button bank – 11 switches, all DPCO interlocking. **£1.00**

Z5290 Push button bank – 6 switches, 4 interlocking DPCO and a further 2 DPCO interlocking **60p**

Z5291 Push button bank – 6 switches, 4 interlocking DPCO and a a further 2, one non-locking DPCO, the other locking 4 pole changeover. **60p**



Z2530 Precision helical pot by Spectrol, model 534. 3Watt 10 turn, linearity ±0.25%. Value 100R ±5%. DP 4.23 Our Price **£1.00**

THE POW-POW-POWER PAGE!!!

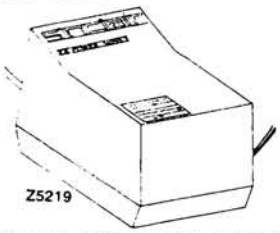
Some great value power supplies - both conventional and switched mode - all offered at a fraction of their original cost!!

Z5278 Plug in wall type, 24V ac 100mA output on 2m lead. **£1.75** 100+ 1.10

Z5279 Plug in wall type switchable non-regulated 3-6-9V 100mA. Comes complete with multiway reversible spider lead (worth 99p on it's own!). **Special Price £2.00** 100+ 1.25

Z5224 Jupiter Ace mains adaptor (there's a bit of history!) plug in type 240V, output 9V 800mA on 2m lead with 3.5mm plug. **£3.20**

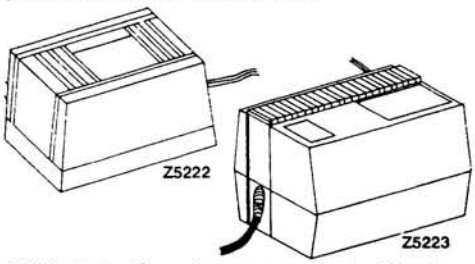
Z5227 Plug in 240V ac Beautronix power supply. Output 9V 333mA on 2m lead with 2.5 power socket. **£2.00**



Z5219 Sinclair ZX powers supply model UK700. 240V ac in, 9V 0.7A DC out. 2 core mains lead. 3.5mm jack lead output. **£2.50**

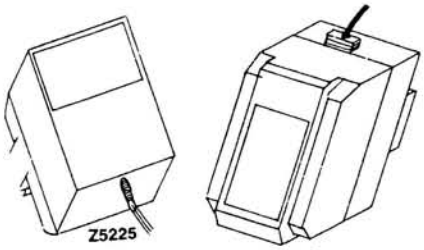
Z5220 Sinclair ZX powers supply model Euro1200. 220V ac in, 9V 1.2A DC out. 2 core mains lead. 3.5mm jack lead output. **£3.00**

Z5221 Sinclair ZX powers supply model Euro1400. 220V ac in, 9V 1.4A DC out. 2 core mains lead with 2 pin Euro plug. 2.1mm power socket lead output. **£3.50**



Z5222 Psion Organiser power supply. Plug in type, 220/240V ac . Output 10.4V 175mA on 2m lead with 2.5 po wer plug **£2.00**

Z5223 Psion printer power supply, input 220/240V ac via lead and 2 pin Euro plug. 10.4V 600mA DC output on 2m lead with 2.5mm power plug. **£3.00**

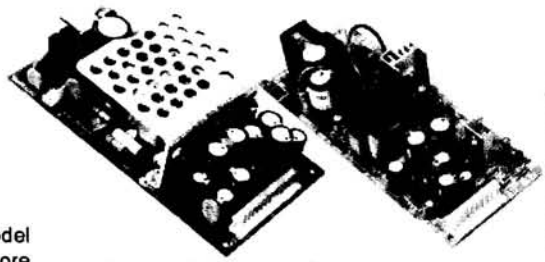


Z5225 Universal mains adaptor, plug in type 240V ac. Output switchable 3-6-9V @ 300mA on end of short lead with 2 pin socket **£2.00**

Z5226 Plug in 240V ac unlabelled power supply with short lead and 5 pin DIN socket. Outputs: 18V @ 250mA ac and 10V @ 500mA ac. **£3.00**

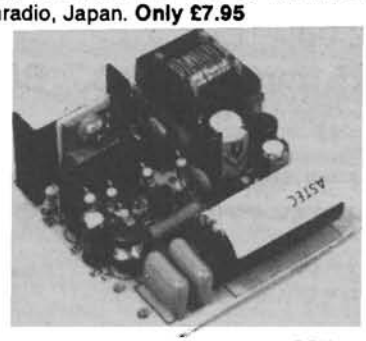
Z5276 Plug-in-wall power supply with 2m lead fitted with 2.5mm power socket. Output 12V 0.2A DC. Fitted with thermal fuse. **£2.00**

SWITCH MODE PSU's



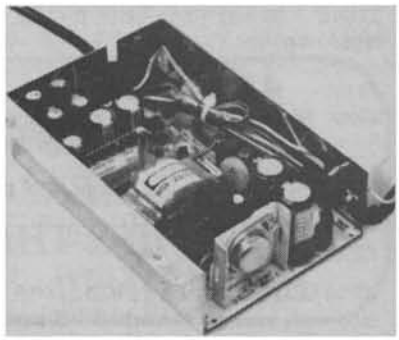
Z5256 Switch mode PSU made by Tamura Corporation. Board 195x100mm with outputs on PCB pins. Input 120/240V ac; Outputs: +5V @ 7.5A; +12V @ 1.25A (2A peak); -12V @ 0.1A. **All this for just £12.95**

Z5257 Switch mode PSU on PCB 190x78mm. 120/240V ac input. Outputs: +5V @ 3A; +12V @ 1.2A; -12V @ 0.1A. Made by Tamradio, Japan. **Only £7.95**



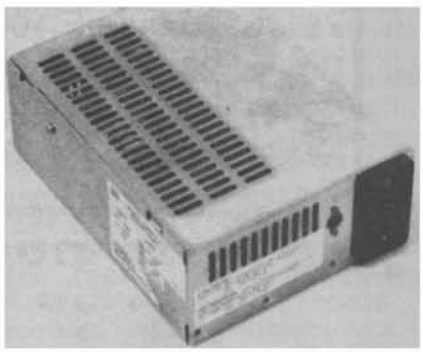
Z660 Astec switched mode PSU type AA7271. This small PCB, just 50 × 50mm will accept 8-24V input and give a stable 5V dc at up to 2A output. The 6 transistor circuit provides current overload protection, thermal cut-out and excellent filtering. Offered at a remarkably low price.
Price **£5.00**

Z5280 Neat switch mode PSU on panel 120x100mm and only 32mm high. Mains input via skt supplied, 3 outputs on socket are +5V @ 2A; +12V @ 0.3A; -12V @ 0.2A. These have been removed from equipment, but are clean and in full working order. **£7.50**



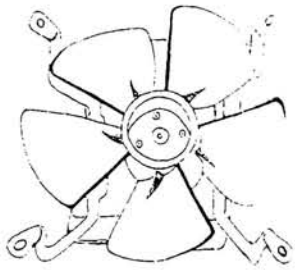
AA12531 Switch mode PSU by Astec partially cased. 160x104x45mm overall with 160x100mm Eurocard PCB. Inputs and outputs are on colour coded flying leads. Input 115/230V 50/60Hz. Outputs: +5V @ 5A; +12V @ 0.15A. Total wattage 50W.
£6.95; 25+ 5.43; 100+ 4.53

Conversion Kit
K725 This kit converts the AA12531 PSU into a much more versatile supply, giving +5V @ 2.5A; +12V @2A; -12V @ 0.1A and -5V @ 0.55A. Complete set of parts and full instructions **£3.50** Instructions only **(K726) £1.00**



BM41012 Superb switch mode PSU made by Astec. Enclosed case 175x136x65mm with switched and fused IEC mains inlet. 160x80mm PCB with output pins extended to external connector. Input 115/230V 50/60Hz. Outputs: +5V @ 3.75A; +12V @ 1.5A; -12V @ 0.4A. Total wattage 65W
£14.95; 25+ 11.70; 100+ 9.75

MOTORS

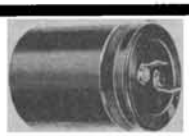


Z5171 Open construction mains fan. Five blade plastic blade 110mm dia (easily removable). Ex-equip in good condition, **£2.50.**

Z5246 Mains synchronous motor with easily accessible gearbox giving a final speed to the 5.5mm dia 12 toothed gearwheel of 0.2RPM (12 revs per hour). **Only £3.95;** 100+ 2.50

ARE YOU A BARGAIN LIST SUBSCRIBER? DON'T MISS THE BARGAINS!!

CAPACITORS



Z5218 22,000µF 16V electrolytic can 35mm dia x 102mm long. Tag ends. Silly price – **only £1.00 each**

K265 4700uF 40V Phillips can, PC mntg 47x35 dia. **2 for £1.00**

Z5180 1000uF 10V radial electrolytic by Nippon 13 dia x 25mm. **Pack of 10 £1.00** 100+ 0.05

Z5181 330uF 16V radial electrolytic by ITT. 13dia x 21mm. **Pack of 14 £1.00** 100+ 0.035

Z5274 40 µF 2.5kV capacitor by Bosch. Size 155x100mm dia. Superb quality **£3.50.**

Z1529 0.22uF ceramic cap. 5mm pitch. **Pack of 30 £1.00**

Z1965 0.01uF disc ceramic 6mm dia. **Pack of 40 £1.00**

Solid dielectric trimmer caps in 3 values, all PC mounting:

Z2454 5.5pF Phillips 808 series, polyethylene film DP 36p **8 for £1.00**; 100+ 0.06

Z2455 10pF Phillips 809.05 series PTFE film. DP 1.66 **3 for £1.00;** 100+ 0.15

Z2456 18pF As above, **3 for £1.00;** 100+ 0.15

PANELS

Z5203 Relay panel – some panel, this! 50, yes 50 DPCO 24V DC min relays, Omron type G2V (our type W834) on PCB 230x160mm with 2xDIN41612 64 way plugs. At 1 off prices, this would cost around £100, but you can have a complete panel at just 20p per relay – **that's only £10.00!**

Z5217 Relay panel – Eurocard 160x100mm with 64 pin DIN41612 plug, containing 8 x Omron G2V 24V min DPCO, LS00, 125 and 14 all in sockets, 4 red LED's, R's, C's, etc. **£2.00**

Z5244 Mosfet panel: 56 x VN0808M (DP 1.01 each!) 80V N-channel 1W 2A device in TO237 case + 28 x ILCT6 8 pin opto isolators, also 30+ CMOS, 74SC etc; 26 SIL networks, 56 0.1uF caps and a few other odd bits. **Super value – only £7.50**

Z5231 Memory panel, contains 208 4164 64k RAM chips all in sockets. **£30.00**

Z5232 As above, but chips are soldered in. **£20.00**

Along with the panels **Z5231/2** mentioned on page 12 (which are here now) there are a great many packed with hi-tech chips – not just 74LS, but Z80 and other processor chips, EPROM's etc. The boards are 430x320mm and mostly contain over 250 chips, date coded '84. **Order Code Z8967** – clearing at **£5 per panel** – but to get a good mix, you'll need 2 or 3 boards.

More GEC Cablevision units – these were the rack mounted distribution panels. 2 types available as below:

Z5204 Diecast housing 252x140x25mm (subscriber module) contains PCB with lots of nice high frequency bits, much of which is containedwithin 2 diecast boxes bolted on to the board. Most of the transistors (there are 17 of them) are BF980, BFR90A/91A BFW92 etc. Single output socket, 2 DIN41612 plugs. **Great value at £4.50**

Z5205 Larger diecast housing 252x140x57mm with 2 PCB's each containing a number of HF parts, pot cores, crystals, etc. These are input modules – 1 traffic and 1 data panel **£4.40**

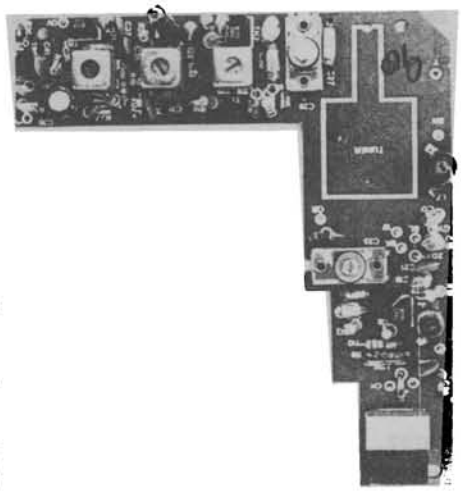
Z4295 Although listed in our main Bargain List, we have large stocks of this panel, and it's not selling very quickly – although it contains a number of interesting and useful parts. There's a 27C64 Eprom in a socket, 80C85A microprocessor, 2x82C51A support chips + 5864 RAM, as well as 8x74HCT chips. There's a small length of ribbon cable to a small sub-panel with 2xMC1488 and 1489, and 3 DIL header plugs. These error correction cards by Tulsedata originally cost over £70 each – they were in last year's catalogue at £10, reduced this year to £5. Will you buy them at **£2.50?**

Z1641 PCB. Printer driver board by Teijin. Contains M5L8041A, 8x74 series, 3.579545MHz xtal etc **£2.00**

Z5167 'S' module-like Z492/3. 11 pin plug in module 80x50x50mm with a small PCB inside containing 2xBC184L, R's, C's, etc. **4 for £1**

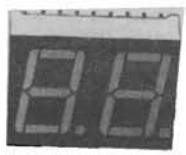
Z5210 Power supply panel – PCB 150x65mm that has been partially assembled but nit soldered. Contains 79M05, 741, BDX339, FRC730, 4x1N4001, 10,000uF 10V cap + R's, C@s etc. (No transformer) **Only £1.00**

Z5211 Another smaller PSU panel 97x55mm, again not soldered. Each board contains 9x1N4001, 121C thermal fuse etc. **8 panels (72 rects) for just £1.00**



Z911 Found some more of this useful 135x135 L shaped panel – nearly a complete radio front end. Although the tuning cap is missing, there are 2 trimmers, IFT's, lots of R's and C's, 2xBF241 FET, BF194, BC208A, 2xBC148C, 2xBC149C etc. Best of all, the board hasn't been soldered, so the components are easily removeable. All this for just **£1.00**

OPTO



Z2434 Dual 7 seg LED , type TDDR5250 by TFK. Red common anode 13mm digit height. DP 1.14. Our special low price (we have 10000 to clear) **2 for £1.00;** 100+ 0.25; 1k+0.18

Z2435 Single 7 seg LED 10mm high digit. Type LN514RK. Common cathode. **4 for £1.00;** 100+ 0.15; 1k+ 0.10

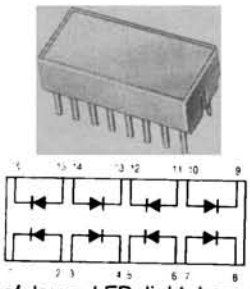
Z2362 MS463M 0.6" common cathode 4 digit multiplexed display on PCB 70x30 with 15 way connector. Intended for digital clock use. Supplied with pin out. **ONLY £1.50**

2 more LCD's in small quantities, both fitted with pins:

Z2357 6 digit 0.5" 50 pin device **£2**
Z2358 2 digit 0.5" 18 pin device **£1**

Z2432 LCD 8 digit 10mm high. Single sided 36 way edge connector. **Only £2.00** 100+ 1.00 1k+ 0.80

LED BAR MODULES



A couple of large LED light bars in 16 DIL package, 10mm high. Made by HP.

Z2462 HLMP2685 HE red 80mcd @ 20mA. DP 2.19. **Our price £1.00;** 20+ 0.70

Z2463 HLMP2785 Yellow 70mcd @ 20mA. DP 2.19. **Our price £1.00;** 20+ 0.70

Using these. you could build up a massive 7 seg display – each module being 1 element. (In practise, to maintain proportions, you'll need 10 displays for each 70mm high digit – details on request)

Z1854 7 seg LED 81720R – giant 1" digit, red. Common anode. **£1.00 each**
Z1855 As above but common cathode **£1.00**

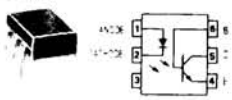
Z1857 Single 7 seg LED LA6480, matches above – green 0.56" **4 for £1.00**
Z1858 7 seg LED LA301MA green 0.3", CA. **4 for £1.00**
Z1859 7 seg LED LA301MK green 0.3" CK **4 for £1.00**

Z2436 3mm red LED's with preformed cropped leads 7.5mm long. Super buy for quantity user – **pack of 100 £3.00** 1000+ 0.02

Z2461 PC mntg packaged red LED – mounts at right angles to PCB. 10.5x8x3.9mm. LED is 3mm. Ore type 9301A. **Pack of 10 £1.00** 100+ 0.05; 1k+ 0.04

Z1934 Stackable red LED – white casing round 6x3.5mm. **Pack of 10 for £1.00**

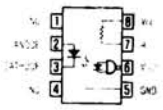
Z1932 Red square LED with rounded corners, 5mm. Pack of 15 **for £1.00**
Z1933 Thin rect. red LED – 5x1.5mm. **Pack of 20 £1.00**



Transistor

Z2467 4N25 optocoupler – transistor output. DP 0.80. **Our price 3 for £1.00**

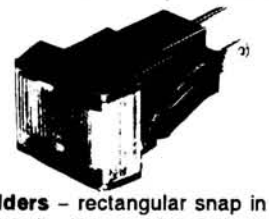
Z2469 CNY17-1B optocoupler, transistor output 6DIL. DP 0.67. **3 for £1.00**



HCPL2300

Z2470 HCPL2300 optocoupler by HP. Logic gate output. DP is astaggering 6.33 – **our price £2.00**

Z2466 ILQ1 16 pin DIL device, probably quad opto isolator, but no info. **2 for £1.00**



Lampholders – rectangular snap in type that take LES bulb. Needs 16.1x11.6mm cut-out. DP (1978) 92p
Z5193 Red **3/£1.00** 100+0.15
Z5194 Green **3/£1.00** 100+ 0.15
Z2385 6V 5W SBC bulb. **Box of 10, £1.50**

Z2459 Neon bulbs 5.5mm dia x 15mm long – wire ended 90V neons at a great saving over normal prices! Made by VCH International. **In packs of 100 at £4.00** 10+ 3.00

ARE YOU A BARGAIN LIST SUBSCRIBER? DON'T MISS THE BARGAINS!!

Fibre Optic Cable

Z5245 Fibre optic cable, multistrand sheathed, 2.28mm od, 0.095mm sq. Type A181. **Approx 5m length £4.00**

Z2476 Similar to above, but 3.6mm od. **£2/metre**

Z2477 Single strand 1mm dia. **Approx 5m length £2.00**

Z2478 Single strand 0.2mm dia. Approx 10m (may not be in one length) **£2.00**

SEMICONDUCTORS

(a) Diodes

Z2439 BZY88C36. 36V 400mW zener diodes. **Pack of 100 £2.00.** 1000 £10.00

Z2465 Dual fast recovery diode BYW51-150A 150V 20A. TO220 case. DP 0.99. **Our price 2 for £1.00**
K129 8 AA113 diodes **£1.00**
K197 50 AA139 diodes preformed for horiz. mntg **£1.00**
K237 200 SD3 diodes, 2 joined back-to-back, preformed **£1.00**
K242 10 S2AR2 rects, 200V 1A **£1.00**
K283 100 1N922 silicon diodes preformed **£1.00**
K285 25 CV8790 signal diodes **£1.00**
K286 10 Germanium signal diode **£1.00**

Z2454 MPS5010 1.2V voltage ref, 2 pin TO92. **3 for £1.00** 100+ 0.15

Bridge Rectifier Clearance

Z2347 4A 200V in line **6 for £1.** 100+.09 1k+.06

(b) Transistors

Z2383 2N6027 P.U.T DP 49p, Our price **6 for £1.00** ;100+.08 1k+ .05

Z2384 MPSA13 3OV Darlington TO92 transistor. Hfe 10,000 @ 0.1A DP 32p. **Pack of 8 for £1.00.** 100+ .06 1k+ .04

Z2453 TIPL762 NPN 6A 120W 350V transistor. DP 4.02 **£2.00**
K448 12 MPSA92 **£1.00**
K449 20 BC258A **£1.00**
K447 10 BF419 **£1.00**

(c) Voltage Regs

Z2460 78M12 500mA 12V voltage regulator at a super price – **6 for £1.00** 100+ 0.09 1k+ 0.06
Z2455 7805 riveted to small ally heatsink (unused) **5 for £1.00**
Z950 LAS1510 voltage regulator. 10V 1.5A TO3 case. **2 for £1.00**

(d) Digital IC's

Z2452 74HCT164 **4 for £1.00**

(e) Linear IC's

Z2456 CA3161E BCD-7 seg decoder driver, with pin out **£1.00**
Z2457 CA3162E A-D converter, 3 digit display, with data. **£2.50**
Z4160 TDA1035. Versatile audio amp chip, with IF amp and demodulator. Electronic volume control. Max output 4 watts into 8R. Supplied with cct and data. **Only £1.00**

LOW COST SOUND CHIPS

A new range of sound effect chips is now being stocked. Supplied with typical circuit.
UM34811A Melody generator **£1.20** 100+ 0.75
UM3562 3 gun sound generator **75p** 100+ 0.38
UM66 3 Christmas carol medley **75p** 100+ 0.38

Z2471 SN75372 interface chip **50p**

Z2472 LF398N sample and hold amp. 8DIL DP 3.94 **Only £2.00**

Z2473 OP27 low noise precision op amp. 8DIL. DP 1.70. **Only £1.00**

Z722 TDA2653A vertical deflection chip. 13 lead SIL package, with comprehensive data **£1.00**

(f) Crystals

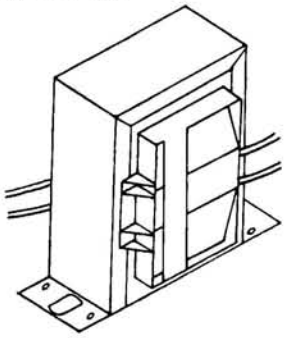
Z2464 8.000MHz crystal HC16 case **50p**

Data sheets giving pin-outs and brief spec are available on all above items at 10p each

TRANSFORMERS

Z5207 Torroidal transformer rated 75VA. Mains primary, 3 secondaries: 7V @ 7A, 8V @ 1.5A, 14V @ 1.5A. Useful voltages at a low price - **£4.50**

Z5202 Torroidal transformer. This is the same series as our Z4290 type by Belclere - 75mm dia x 33mm thick. Fixing by means of a tapped bush. Mains primary, secondary 14-7.5-0-7.5-14V @ 1.25A **Excellent value at £2.95 each** 100+ 1.50



Z5206 Super transformer for railway and other modellers. Mains primary, secondary 16V 3A. Size 50x55x60mm high. 61mm FC. Great value for money, **only £3.00** 100+2.00 1k+1.50

Some new mains transformers, ideally suited for PSU's:

Z5212 21V 1A Clamp, wires 60x45x50mm **£1.50**

Z5214 11V 0.5A PC mntg 53x40x4 4mm **£1.00**
Z5215 15V 0.25A PC mntg 43x33x3 6mm **75p**

All the following are mains transformers, and have secondaries as shown. Current rating is estimated from size of transformer.

Z5233 17V 1A 56x67x53mm **£1.50**
Z5234 14V 0.5A 45x54x41mm **£1.00**
Z5235 9V + 10.5V 15VA max. 56x67x50mm **£2.00**
Z5236 21V 500mA 50x60x45mm **£1.50**

Z568 Transformer, large auto rated 8.3A **£12.00**

Z8971 Transformer rated 100VA - 0-120, 0-120V primary and 0-20, 0-20V secondary (5A total). Size 89x75x68mm. DP 19.06. Our price **£9.50**

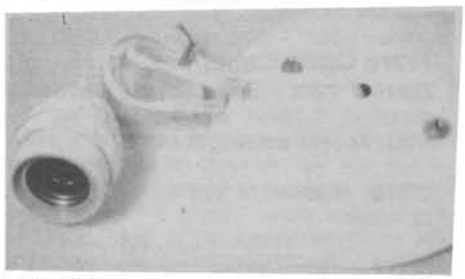
Z8972 Transformer rated 100VA by Majestic, 0-240V pri, 25V 4A sec. 100x85x70mm. **£6.50**

Z1773 DC-DC Converter - 5V in, 15-0-15V 10-34mA (1W) Size 34x26x10. **Only £3.00**

FINISHED GOODS

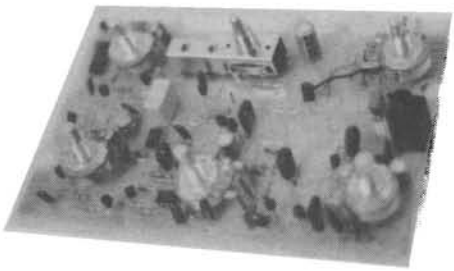
Z5285 Oscillator /amplifier type RT5001 by GEC, housed in an aluminium and bakelite case 180x52x50mm. The PCB has on it a small transformer, 3x100μF 16V tant bead caps, 2xBCY40 etc. **Only £1.50**

Z5287 Here's an oldie - we had a batch of these some time ago - the "Tyrometer" - used to indicate tyre pressures on HGV's, this is the pod that fitted into the drivers cab. On the front panel are two small push and a toggle switch. Inside is a PCB with 11 miniature wire ended bulbs, a choke, 2 caps and a buzzer. There's a short length of 14 way ribbon cable, too. **£3.95**



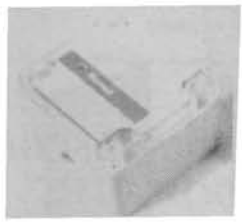
Z5268 Boxed suspension cord set. White painted steel domed ceiling plate 137mm dia with 0.5m twin lead terminated to ES plastic hanging socket, also white. (250V 500W max rating). **£2.50** 25+ 1.75

Z2109 Dynamic microphone with lead by Adastra, model M8. **£3.50**



Z5286D Metal detector panel 185x115mm. This is the complete PCB from an expensive (£80+) "treasure detector" - just add wire coil and meter to make a working unit. Circuit uses 15 transistors and 3 IC's. There are 5 pots and a rotary switch. Detailed info inc. cct diagram and coil windings supplied.. **£12.95**

Z5201 Ingenious level indicator for LPG tanks. Magnetic strip attaches to exterior of tank and works by pouring hot water down gauge. Colour change will indicate level of gas left. 220mm long. Supplied on card with full instructions. **Only £1.00**



Z5288 Polycarbonate grey sealed box 82x80x55mm with clear lid (DP 9.11!). Inside is a steel panel with loud 12V buzzer and a PCB with push button (operates when lid is removed) a green LED and 1N4005. There's a 12mm hole in the side of the box and a cable gland to fit. **Exceptional value at £4.00**

We buy surplus stock - send details to the Managing Director, Greenweld Electronics, 27 Park Road, Southampton, SO1 3TB

LIGHT UP YOUR LAYOUT

K692 Super deal for modellers - we supply a mains power supply, 100 miniature lamps for wiring into your railway layout or dolls house, and 100m of flex. Circuits and details of how to wire up the lamps in series/parallel are provided. Everything for just **£19.95**

CONNECTORS

Extra special price on gold plated DIL sockets – a parcel of Vero DIL sockets has arrived:

(a) PCB mntg, std profile:

Z5237 28 way **£1/10** 100+ .06
Z5238 40 way **£1.50/10** 100+ .08

(b) Wirewrap

Z5239 18 way **£3.80/10** 100+ 0.20
Z5240 20 way **£4.30/10** 100+ 0.25
Z5241 28 way **£7.00/10** 100+ 0.40
Z5242 40 way **£10.00/10** 100+ 0.65

Z2360 Turned pin DIL socket – 24 pin, but 0.3" pitch not 0.6". **Pack of 5 for £1.** 100+ 0.10

ARE YOU A BARGAIN LIST SUBSCRIBER? DON'T MISS THE BARGAINS!!

P5430 14 pin DIL header plug, gold plated solder type. As listed in our cat at 65p – special purchase price **3 for £1.00;** 100+ 0.16; 1k+ 0.12

Z739 40 way DIL header plug, gold plated. **3 for £1.00**

P9016 16 way IDC header socket. **Pack of 5 £1.00** ; 100+ .10

Z2379 IDC 16 pin DIL socket. **Pack of 5 £1.00**

Z2382 Double row 0.1 socket PCB/chassis mounting 16 way x 2, but only 1 row of pins. **Pack of 5 £1.00**

High quality 3.5mm mono jack plugs with coloured plastic sleeves made by Cliff:
Z2457 Red **10/£1.00** 100+0.06
Z2458 Green **10/£1.00** 100+ 0.06
Z2479 White **10/£1.00** 100+ 0.06
Z2480 Cream **10/£1.00** 100+ 0.06

Z1485 RC4200-8S 8 way gold plated socket – matches McMurdo red range, but blue **£1.50**

Z1768 Numicator/CRT base 13 pin PC mntg by Cinch. **Pack of 4 £1.00**

Z042 2 pin DIN speaker sockets, PC mntg. **Pack of 25 £1.20**

Z2448 Phono plug. Black plastic cover. We have a large quantity of these to dispose of, so are clearing them at **25 for £1.00**, 100+ 0.03, 1000+ 0.02

The 1992 GREENWELD Catalogue is out now! 132 pages of electronic and modellers supplies.

Only £2 (UK/ BFPO; £4 O'seas)

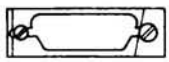
ORDER NOW!
See order form for details

Z2397 25 way 'D' type shells. Can be used as either plugs or sockets, according to pins fitted. (No pins available) **Pack of 6 £1.00**

Z2395 Right angle 50 way 'D' plug, PCB mounting, plastic housing. **£2.00**

Z2396 Right angle 9 way 'D' socket. **40p**

Z2430 37 way 'D' type plug, IDC type **£2.00** 100+ 1.00



Z2429 15 way 'D' connector sliding lock retainer by ITT type DA51220-1 DP £3.45, **Only £1.00** 100+ 0.40

Z2445 Data connector – like BT skt – 6 way PCB mntg for right hand plug. DP 1.74 **Our price 2 for £1.00,** 100+ 0.30

Z2398 DIN 41612 IDC socket, C body, rows A and C only. List £6.65. **Our price £2.50**

Z2399 20 way card edge IDC socket. DP 2.47. **Our price £1.00**

Z2426 25 way double sided 0.1" pitch edge connector, gold plated, solder tags. **£1.00**

Z2427 50 way double sided 0.125" pitch edge connector, gold plated, wirewrap terminals. **£2.00**

Z2428 PC mounting edge connector, 13 way double sided 0.15" pitch. Gold plated. **Pack of 2 £1.00** 100 + 0.25

NEED A LEAD?

Here's a selection from a recent parcel:

Z5247 1.1m long twin thick flex, 2x3mm wander plugs one end, 3.5mm mono jack plug the other. Assorted colours. **Pack of 3 £1.00;** 100+ 0.18

Z5248 1.8m long twin flex, 3.5mm mono jack plug to open end. Fitted with sleeved square grommet. **Pack of 5 £1.00;** 100+ 0.10

Z5249 2m long twin flex, 2 pin socket to open end. Fitted with sleeved round grommet. **Pack of 5 £1.00;** 100+0.10

Z5250 1.1m long 3 core sheathed cable with odd socket one end, yellow 5mm LED in plastic housing the other. **Pack of 8 £1.00;** 100+ 0.06

Z5251 1m long twin flex, 2.5mm power socket to open end. Fitted with sleeved square grommet. **Pack of 3 £1.00;** 100+0.18

Z5252 Super ***heavy duty extra long*** (2.7m) twin sheathed cable with moulded on 2.5mm power socket to open end. **2 for £1.00;** 100+0.25

Z5254 2m long 4 core sheathed cable fitted with a sleeved grommet. 4 pin DIN socket to open end. **4 for £1.00;** 100+ 0.12

Z5255 2m long 2 core black sheathed mains cable (3A). Moulded 2 pin Euro plug one end, 0.25 tags the other. **3 for £1.00;** 100+ 0.18

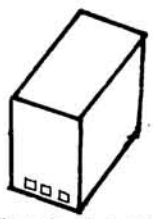
BATTERIES

Z2452 Lithium battery – inorganic type by Tadiran, type TL5104. AA size, 3.6V PC tabs. Date code 06/88 **£1.70**

Z2453 As above, but type SL360, date code 4/87. **£1.50**

Z2450 Tadiran AA size battery 3.6V PC mounting. Date code 6/89. DP on these is 5.17. Our price **£2.00** 25+ 1.50 100+ 1.20

Z2451 Tadiran 0.5AA size battery, 3.6V PC mntg. Date code 8/86. DP 4.58 Our price **£1.75** 25+ 1.35 100+ 1.05



Z4150 AA Ni-cads at a price never before seen! Pack of 8 in a tough plastic case 56x63x33mm – either use as a 10V battery pack or remove and use cells individually. Special low price **£1.60 each;** 25+ 1.10 100+ 0.80

RELAYS

Code	Mnf'r	Type	Coil V	Coil R	Contacts		Base	Type	Size l.w.h	Qty	Pic	Price
Z2423	VARLEY	VP4	48V	5800R	4PCO	1A	ST	C	29.18.29	93	A	1.00
Z2414	SIEMENS	V23154	12V	800R	4PCO	1A	PC	C	29.18.29	96	A	2.00
Z2421	ITT	A2825	24V	1000R	6PCO	1A	PC	C	33.30.29	57	B	1.00
Z2424	ITT	A2446	48V	3000R	DPCO	1A	PC	C	29.16.13	59	C	1.00
Z2425	FEME	RCP11	110V	10K	3PCO	10A	11PIN	C	35.35.56	84	D	2.00
Z2420	AMF	KUP14D	24V	450R	3PCO	10A	ST	C	37.34.51	82	E	2.00
Z2419	NATIONAL	AE1324	24V	2000R	DPCO	1A	PC	C	30.20.10	218	F	1.00
Z2413*	AX	481F	12V	1500R	SPCO	1A	PC	M	32.10.10	533	G	1.00
Z2403*	CLARE	HGR2M	5V	500R	DPCO	1A	PC	M	40.25.10	117	H	1.00
Z2418	OUB	SS124D	24V	1200R	SPCO	5A	PC	C	21.17.15	118	I	1.00
~~Z2412~~	~~OUB~~	~~SS-212D~~	~~12V~~	~~600R~~	~~DPCO~~	~~2A~~	~~PC~~	~~C~~	~~18.10.12~~	~~20~~	~~J~~	~~1.00~~
Z2417	OUB	SS-224D	24V	1200R	DPCO	2A	PC	C	18.10.12	196	J	1.00
Z2422		AZ1530-04Y	36V	4300R	SPCO	2A	PC	C	26.14.11	648	K	1.00
Z2400*	GENTECH	G42F	3V	130R	SPB	1A	PC	M	33.16.11	127	L	1.00
Z2416	HAMLIN	HE221A4860	24V	11K	SPM	1A	PC	R	32.10.09	799	M	1.00
Z2411	HAMLIN	HE221A7080	12V	800R	SPM	1A	PC	R	32.10.09	1501	M	1.00
Z2407	HAMLIN	HE262A7780	5V	470R	DPM	1A	PC	R	32.12.09	135	N	1.00
Z2406*	ELLIOTT	36876/5	5V	130R	SPB	1A	PC	R	32.15.10	345	O	1.00
Z2410	ALMA	CPR3	12V	1100R	3PM	1A	PC	R	38.23.12	38	P	1.00
Z2405*	CLARE	PRME15005AB	5V	470R	SPM	500MA	DIL	R	20.07.05	354	Q	1.00
Z2404*	HAMLIN	HE721A5262	5V	520R	SPM	500MA	DIL	R	20.07.07	51	Q	1.00
Z2415	AX	132A-1	12V	180R	SPM	500MA	DIL	R	20.07.07	31	Q	1.00
Z2403*	AX	132A-4	5V	520R	SPM	500MA	DIL	R	20.07.07	65	Q	1.00
Z2402*	CLARE	CUPV10201	5V	170R	SPB	1A	PC	R	25.10.9.5	50	N	1.00
Z2409*	CLARE	CUPV10302	12V	370R	SPB/SPM	1A	PC	R	31.12.04	27	O	1.00
Z2401*	AX	175A-4	5V	500R	SPM	1A	PC	R	32.15.9.5	47	R	1.00

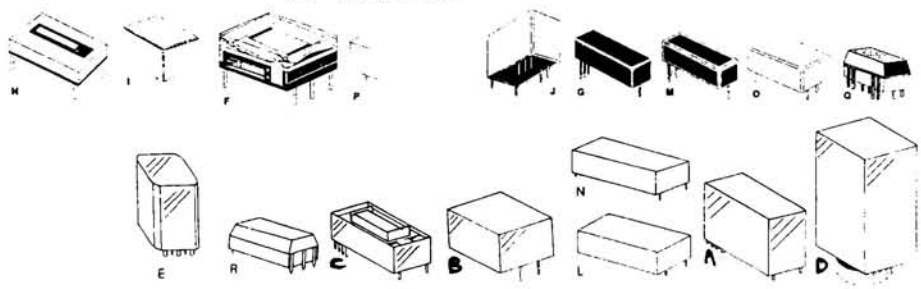
Discounts for larger purchases: 100+ (any mix) less 40% 1000+ less 60%

Type: C= conventional
M= mercury
R= reed

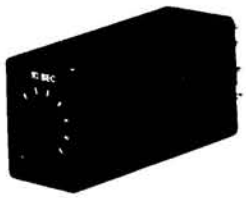
*Internal diode protection

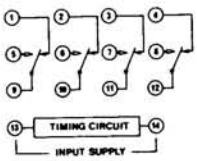
Contacts: 4PCO Four Pole Changeover
DPCO Double Pole Changeover
SPCO Single Pole Changeover
SPM Single Pole Make
SPB Single Pole Break
3PM Three Pole Make

Base: ST Solder Tags
PC PCB mntg
DIL 0.3" pitch dual in line



TIME DELAY RELAYS





These all originate from the largest component distributor in the UK and are in original packing. Sub min 4 pole changeover plug in type, delay before energize. Same as Omron H3Y4 series

Code	Volts	Time	DP	Price
Z5186	240V ac	5s	25.83	**£5.00**
Z5198	240V ac	10s	25.83	**£5.00**
~~**Z5199**~~	~~240V ac~~	~~10m~~	~~25.83~~	~~**£5.00**~~
Z5183	110V ac	5s	25.83	**£4.00**
Z5184	110V ac	10s	25.83	**£4.00**
Z5185	110V ac	60s	25.83	**£4.00**
Z5186	110V ac	5m	25.83	**£4.00**
Z5187	24V DC	5s	24.19	**£5.00**
Z5188	24V DC	10s	24.19	**£5.00**
Z5189	24V DC	60s	24.19	**£5.00**
Z5190	24V DC	5m	24.19	**£5.00**

Z2350. Open construction 12V relay with 0.25 tabs. Ideal for car use. Single pole make contact rated 15A. **£1**

Z2496 Omron MY4 relay. 48V ac coil, 4PCO contacts rated 5A **£1.00**

Z2497 IMO 60.32 relay. 12V DC coil, DPCO contacts rated 10A **£2.50**

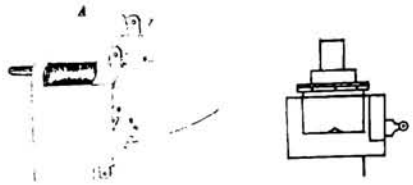
Z5178 Ex-equip PCB mntg 12V heavy duty rela - DPCO contacts rated 10A 250V. IMO model 60.42. **£1,50**

Z5179 As above but 3 pole changeover IMO 60.43. **£2.00**

Z2442 PCB mounting relay 30x24x10mm. 4PCO. 1150R coil, operates from 15-30V. **£1.50**

Z2433 Hermetically sealed mains relay, miniature plug in type with 4PCO contacts. Size 22,5x29x32mm. DP (1987) 17.75. **Our special low price £4.75**

SWITCHES



Z5174 Timer switch by Diehl of Germany. Superb geared mains motor, (1 rev per 12 hours) operates a cam that switches 2 change over contacts with centre - off positions rated 16A 250V. Size 60x54x43mm. Spindle is 14x6mm dia. **Only £3.00** 100+ £1.50.

Z2361 Heavy duty push switch - push to change over, locking. Needs 12mm hole. Plunger is 8mm dia x 9mm high, **3 for £1.00**

Z2387 PC mounting push switch - 1 pr make and 1 pr break contracts. Right angle plunger is 5mm long x 2mm dia. With protective cover. Again, very high quality. **2 for £1.00**

POINTS LEVER SWITCHES

Great switch bargains for railway modellers - these small switches 18mm wide and 12mm high (excluding lever) and just 4mm thick with 14mm FC come in two versions:

Z2363 2 position, 2 pairs make and 2 pairs break. **Pack of 5 £1.00** 100+ 0.10

Z2364 3 position, 6 pairs contacts (2 pole 3 way). **Pack of 5 for £1.00** 100+ 0.10

TRANSDUCERS

Z5266 Miniature 15R speaker 45mm(1.75") dia. **3 for £1.00;** 100+ 0.16; 1k+ 0.10

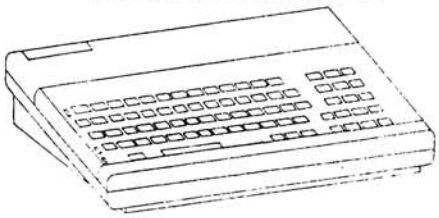
Z5267 75R miniature speaker 57mm dia. **3 for £1.00**

Z5275 57mm 8R speaker with 0.5m twin flex and socket attached. **3 for £1.00**

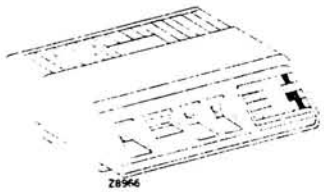
Z2503 Sub-min 8R speaker with mylar cone. 30mm dia with short lead fitted. **2 for £1.00**

We are always looking for new lines to add to our lists. Send details/ samples of goods available to: The Managing Director
Greenweld Electronics Ltd
27 Park Road
Southampton SO1 3TB

Viewdata Terminal/Modem



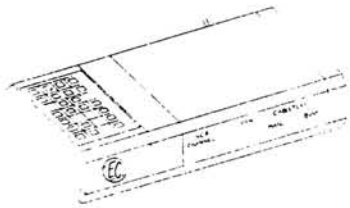
Tandata TD1100 alphanumeric Viewdata/Prestel Adaptor.
These units were used with a home banking system. The console was hooked up to your TV and telephone line, and by using the standard qwerty keyboard with seperate numeric keypad, you could access your account. The well styled black and grey case 300x180x75/40 has a 75 key keyboard connected inside by a DIL plug to the main PCB. This has mounted on it the modem sub-panel + 3 relays, UM1286 Astec colour modulator with sound, + SAA5020, 5050, 5070, SY6504, 68B10, MCM51101P45, 2x2114 & 2732 EPROM all in sockets, as well as over 20 other LS and linear chips, transistors etc. There's a back up nicad battery and a regulated power supply. On the rear panel is an on/off rocker switch, UHF output socket, printer skt(15 way D), and cassette DIN socket for recording data.
There are 3 leads attached; 4m long mains lead with 13A plug, 4m long BT lead with old-style plug, and a 3m long TV co-ax lead.
All in all, a versatile, useful compact unit either to use as it is or for the parts within. The component value alone is over £60, so you can see what a bargain this is - it even comes with a photocopied handbook!!
Order Code Z8963. The whole unit as described for just **£12.95**
Also available brand new and boxed, **Z8964 £16.95**



Z8966 Prestel set less monitor. This cased unit 420x430x100mm made by Phillips, model HU01 contains all the logic and control circuitry for Prestel - the monitor (not supplied) sits on top. On the back panel there is an 8 pin DIN socket for text output to monitor, mains outlet to monitor and an 8 pin DIN printer socket. There's also a mains lead and old type lead to telephone socket. On the front panel there is a detachable (on curly lead) keypad (20 keys) on/off keyswitch, tape and keyboard sockets and indicator lamps. Inside there's a large transformer and power supply and 4 PCB's - one is a modem panel; one has 8048 and SBB2626 in sockets + 15 other chips, transistors etc; the third has SAA5030/5042/5020/5050, a bit of memory (2x2114) + a few other chips. The fourth panel has SAA5010 in socket, 9xBSX20, 4xBC548/558. All boards are interconnected with plugs and sockets. These units are complete but not new and may well be in working order - but we're selling them for the parts value only - just **£16.00**

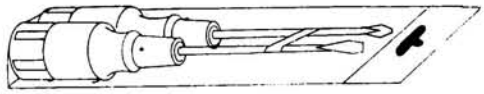
Z5200 Spirit Burner. Very useful in science labs or for the home experimenter. Chromed steel container 93mm diax48mm high has absorbent material covered in wire mesh. Adjusting lever allows variations in temperature. Complete with 70mm dia dish for heating substances in. **Only £2.50**

Z5216 Tandata "Homedeck". These are later versions of Z8963 and are (a) smaller and (b) remote controlled. The two tone grey case is 270x110x28mm and has a full qwerty keyboard and seperate numeric keypad. Inside, on the PCB are a few components to transmit the data via 2 IR LED's to the receiver. The unit is powered by a PP3 battery. Super value at just **£3.00**



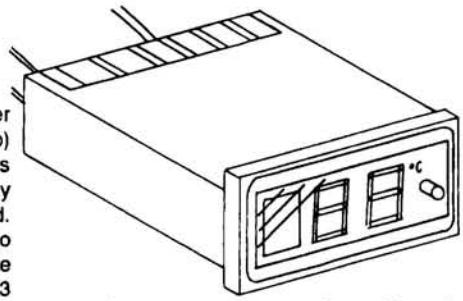
Z8970 Remote control cable TV unit made by GEC. Attractive black plastic case 205x120x40mm with membrane pushbutton keypad (22 keys). Front panel has 4x5mm red LED's to indicate status and a dual 7 seg display to show channel. On the 195x102mm PCB is a small regulated power supply (12V & 5V) derived from **Z5226** plug in PSU (not supplied). The main chip is a KS49429 and there are also TBA120T, ULN2003B, 4049 + 4.000MHz crystal & 3 small signal transistors as well as the IR detector diode. 2 screened cases contain (a) a PCB with some filter circuitry utilizing surface mount technology, few small chokes, couple of trimmer caps and input and output sockets; and (b) the infra red decoding circuitry using a TDA3047 chip. Regrettaby, we don't have any remote controllers, but these units offer great value for money - **just £5.95 each**

MONSTER SCREWDRIVER BARGAIN !!!



Tremendous value - 2x200mm screwdrivers, 1 pozi, 1 straight blade in plastic pouch. Wooden handles. Overall length 340mm. **ONLY £1.50.** Order code **Z5172**

A nice parcel of digital thermostats has just been delivered - these are high quality units badged BIRCH and manufactured by Wrynech.

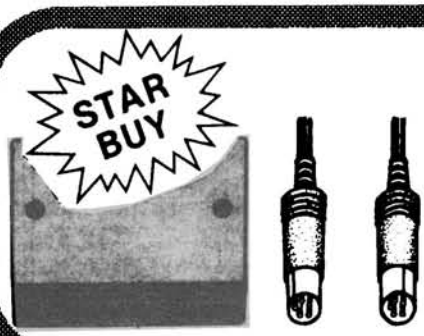


Z5228 Complete unit in panel mounting clip-fix case (requires 60x27mm cut out). 2 digit display. Range 40-99°C. Independant on/off set points. Uses LM35CZ sensor, supplied on a 3m long lead (DP 5.93). Has 5V relay on board with 240V 8A c/o contact. Exceptional value for money **£14.95**

Z5229 Case for above unit with red bezel and front clip. Overall dimensions 57.5x25x70mm deep. **Only £1.50 each** 100+ 0.80

Z5230 Complete panel to fit in above case (no probe) **£9.95**

Greenweld
27 Park Road
Southampton
SO1 3TB
Tel (0703) 236363
Fax (0703) 236307
We are open to callers from 9-5.30 Mon-Sat



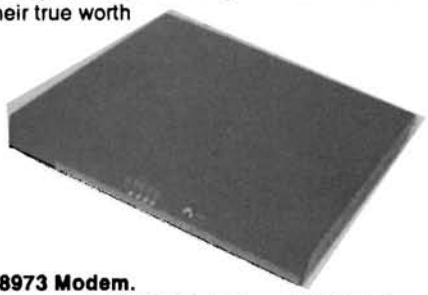
DRAGON INTERFACE

SB9 **£1.00**

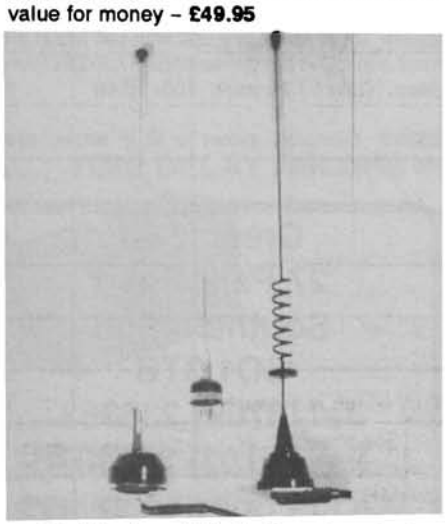
Interface unit to convert digital input (as obtained from Atari-compatible joysticks) to the correct analogue level for use with such home computers as Dragon, Tandy Colour, Radio Shack, etc. Two separate channels for competitive games. Two 5-pin 240° DIN plugs to compact case with two 9-pin plugs, with internal circuitry and connections for Atari-type joysticks. Black plastic.
Dims: .....(Body) 116 x 62 x 29mm

MODEM MADNESS

This parcel consists of several hundred brand new BT approved modems – but we are not allowed to say who makes them. They do, however, offer extremely good value for money, as they are being sold for a fraction of their true worth



Z8973 Modem.
A compact V21/V23 300 or 1200/75 baud modem made for a major British telephone company. The units are new, boxed and complete with power supply but are without the official instruction manual, and have had the manufacturers label removed. Some instructions have been worked out by our technical department and these will enable you to use it as a working modem – further information gratefully received. Plugs directly into a standard BT 600 series socket and a RS232 port on any computer. Tone/auto dialling + last number re-dial. Dimensions 205mm x 195 mm x 30mm. Front panel has reset button, and 5 status LED's. Excellent value for money – **£49.95**



Cellular Mobile Aerials

A few different types, all new in original packing.

Z5281 Antiference TAP9036 ¼ + ½ wave 3dB. Frq 890-960MHz VSWR 1.5:1. Includes ¾" claw mount with 5m of RG58 cable. Complete with fitting instructions. **Only £3.00**

Z5282 ZS Electroniques ZS914-09 claw mount with 4m cable and fitting instructions **£3.00**

Z5283 Jaybeam MU904-ZG/h with 4m of cable attached. **£3.00**

Z8974D Transam M1 mobile/mains intelligent modem. New and boxed with mains plug in power supply (9.5V 800mA). Auto dial and answer, V21/23, buffered terminal interface from 75-9600 baud, password access. Black steel case 230x150x50mm. Rear panel has lead with BT plug, 15 way D skt for radio interface, S5/8 serial data socket (use our **Z4284** S5/8-RS232 converter, price **£6.00** if required), and 12V input socket. On the front panel there's an ext/batt/off switch; auto/manual answer switch; originate/answer switch; 300/1200 switch; normal/intelligent switch. Comprehensive 36 page user manual. (photocopied for £1.50). **Our Price £50.00**

ORDERING INFORMATION

Prices in bold include VAT @ 17½% - quantity prices in light type do not include VAT which should be added at the current rate. We accept cheques, PO's, Money orders, Bank drafts, cash including foreign currency bank notes, book tokens, Access and Visa. We are happy to process Official Orders from Education and other government funded sources. Don't forget to include your name and address. Send the completed order form to:

Greenweld Electronics Ltd
27 Park Road
Southampton
SO1 3TB
United Kingdom

Most orders are despatched within a day or two but some may be delayed because of temporary non-availability of goods.

HOW TO CONTACT US:
By Post: Use the address above
By Phone: (0703) 236363
(Ansaphone out of business hours)
By Fax: (0703) 236307
By EMail (Compuserve): 100014,1463

We are happy to despatch orders to anywhere in the world. The most convenient way to order is by Fax, and the best way to pay is by credit card. Our International Telefax number is +44 703 236307, although you may of course telephone us on +44 703 236363, or write to us. Overseas orders are exempt from VAT, and 15% should be deducted from prices shown, except books, which are zero rated.

Z5284 Modified BT socket.
Unusual item believed to be used in conjunction with the above modem. It consists of a standard BT socket that has 6 way flat type cable wired into it; this probably plugged into a special outlet that could provide power as the centre pair (blue and green wires) are connected to a switch which links to a 6 pin DIN wired as per above modem power supply. A second switch enables selection between the modem and 'phone plugged into the socket. Power and Data LED's indicate the state of the junction box. **£3.00**

Z8975 Data Switch
Another item from this package of data communication hardware. Powered from a modified RS232 connector that has a 12V supply on line 5 it is believed that the above telephone socket plugged into this device to provide power for the modem and enabled selection between speech and data communication by both the switch on the unit and the "remote" socket switch. Steel case 170x102x45mm has main PCB with 2 relays, pot cores, chips etc, and a small power supply sub panel with an Astec voltage converter, 7805 etc. **All for £4.50**

Z8976 This is the above two items – they are boxed together. (Z5284 + Z8975). **£6.95**

Z8958 Modem returns – model 21/23IAD (Same as our Z8937-see P7 of B/L 75). No idea what's wrong with them – some have fault labels on them. Supplied complete with plug in PSU. **£15**

SPECIAL OFFER – SAVE £10!!

Z8973 Modem + Z8953 Maximiser

Details of maximiser on Page 7 of B/L 75 or Page 5 of B/L 75A

Normally £69.95 - **Offer Price £59.95**

ORDER FORM SS92 1 2 3 4 5

Send your order to:

GREENWELD
ELECTRONIC COMPONENTS

27 Park Road, Southampton, SO1 3TB
(A different postcode is correctly shown on reply paid envelopes)

Customer No: ..... **Date:** .....

Name: .....

Address: .....

.....

.....

..... **Post code** .....

OFFICE USE	ORDER CODE	QTY	No of Packs	Description		Price	£	p
	Z9999			Bargain List Subscription Service Our next 6 Lists with reply paid envelope	UK/BFPO inc Post O'SEAS inc Post	2.00 4.00		
	B/L 75			1992 48 page Bargain List Supplement (Free if requested with order)	UK/BFPO inc Post O'SEAS inc Post	0.40 1.00		
	C1992			1992 Catalogue	UK/BFPO inc Post O'SEAS inc Post	2.00 4.00		
					Tick which required			

IMPORTANT: Please fill in the following information. Thank you

1. **Did you receive this Catalogue (Tick all that apply):**
   ☐ **with your previous order** ☐ **Unsolicited** ☐ **As a Bargain list subscriber**
   ☐ **with Everyday Electronics** ☐ **With ETI**
   ☐ **with Television** ☐ **Other (Please state how)**
2. Please let us know if you want this order:
   ☐ Sent as soon as possible with a credit note for any parts out of stock;
   ☐ Sent as soon as possible with any out of stock items to follow: (only if value over £10);
   ☐ Held for expected deliveries for up to ..... days (state how long);
   ☐ Other (please specify) .....
3. Have you ordered from us before? YES ☐ NO ☐ Are you already a Bargain List Subscriber? YES ☐ NO ☐
4. Please tick method of payment: Cheque ☐ PO ☐ Cash ☐ Credit Card ☐ Other ☐
   Credit Card No (Visa/Access/Connect): ..... Ex Date .....

(If ordering by credit card, only goods supplied will be charged, on the date of despatch) **SIGNED** .....

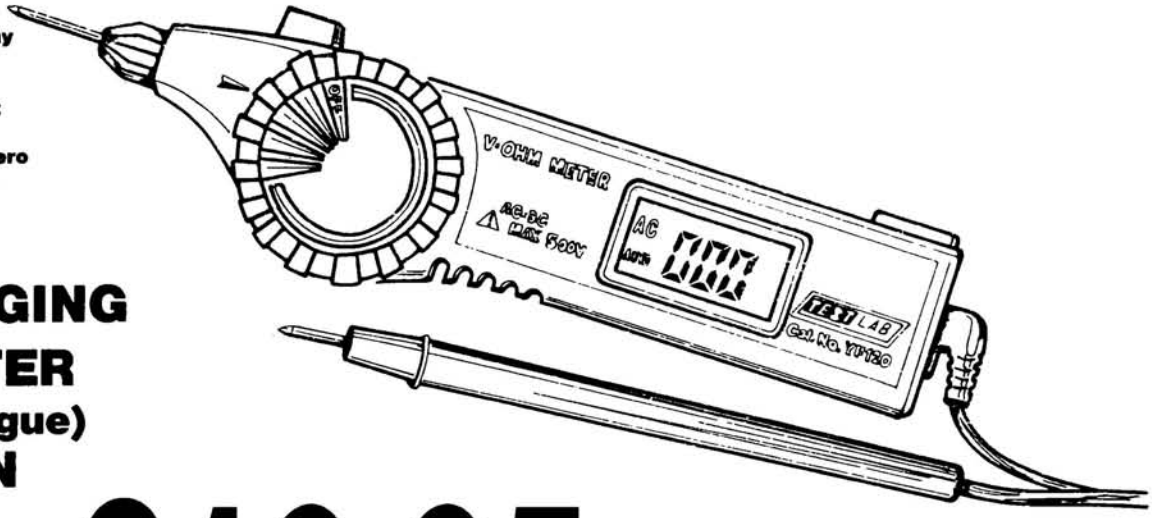
Standard Postage*		**£2**	**50**
OR Next day delivery †		**£9**	**00**
Sub-Total			
Deduct Cr			
TOTAL			

* UK/BFPO only. O'Seas extra
† Mainland UK only

CQ/PO:	EX?:	C/N	C/C	CASH	B/T	G/V	ST	
CO:	CH:	P:	D:					

TWO STUNNING DIGITAL MULTIMETER OFFERS!!

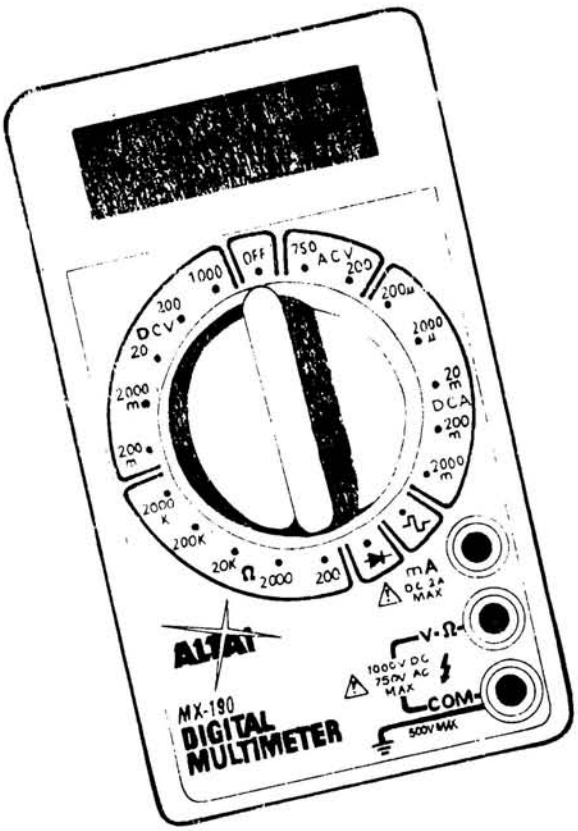
- ★ 3½ digit 8mm LCD display
- ★ Fully autoranging
- ★ Display hold facility
- ★ Diode and continuity test
- ★ Probe styling
- ★ Automatic polarity and zero
- ★ Protective carrying case



A £39.95 AUTORANGING MULTIMETER (1991 Catalogue) LESS THAN ½ PRICE!! YOURS FOR JUST

£19.95

Order Code	**DM1360**
AC volts	0-2-20-200-500 Vac ± 2.3%
DC volts	0-200m-2-20-200-500 Vdc ± 1.3%
Resistance	0-200-2k-20k-2M-20MΩ ± 2%
Dims	133 × 29 × 17mm



- ★ 19 ranges
- ★ 3½ digit 12mm LCD display
- ★ Signal injector function
- ★ Diode test
- ★ Fuse protection
- ★ Automatic polarity and zero
- ★ Test leads with 4mm plugs
- ★ Battery and instruction manual included

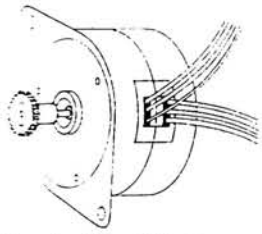
PRICE

£14.95

Specification

AC volts	0-200-750Vac ± 1.2%
DC volts	0-200m-2-20-200-1000Vdc ± 0.8%
DC current	0-200µ-2m-20m-200m-2Adc ± 1.0%
Resistance	0-200-2k-20k-200k-2mΩ ± 0.8%
Signal Injector	50Hz square wave 5V peak to peak
Dims	126 × 70 × 24mm
Order Code	**MX190**

*PRICES IN **BOLD** TYPE INCLUDE VAT: PRICES IN LIGHT DO NOT*



Z5045D Superb little 12V stepper motor by Airpax. 35mm dia x 21mm deep with a 16 tooth 9.5mm dia gear wheel mounted on the 2mmdia spindle. Fixing centres 42mm. 7.5° 48 step. Supplied with data. 100+ DP 9.04; **Our Price £3.00;** 100+ 2.00

AC MILLIVOLTMETER

Y134A **MV3002A**

A highly sensitive and precise AC millivoltmeter used for measuring AC voltages in the range of 300μV to 100V between 5Hz and 1MHz. The output terminals allow this unit to be used as a wide-band high gain amplifier or pre-amplifier. Calibrated with AC volts and two decibel scales.

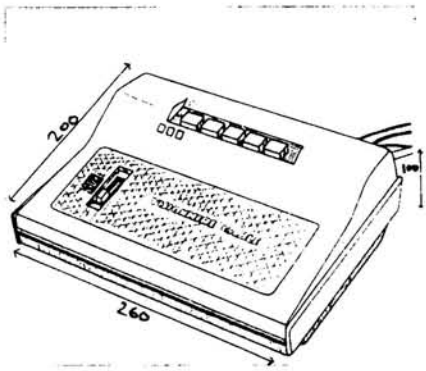
Voltmeter:
Voltage range ..... 300μ to 100Vac ±3%
Frequency range ..... 5Hz to 1Mhz
Input resistance 10MΩ
Input capacitance ..... Below 50pF

Amplifier:
Output voltage ..... 1V no load
Frequency range ..... 10Hz to 500kHz
Output impedance ..... 600Ω ±20%

Power 240Vac 50Hz
Dims ..... 142 x 195 x 205

PRICE £60.00

CABLEVISION CALAMITY !!!



Seems like Visionhire became a bit overstocked on their cablevision consoles - we've just purchased a quantity of these superb brand new units which contain some great electronics and as ever can offer them at an absolute BargainPrice!!

Two tone brown case (dimensions as shown) contains PCB 192x195mm with easily removed UHF modulator made by Labgear (Sound and Vision); video preamp; stabilized power supply and all the decoding circuitry (9 transistors and TBA673 chip).

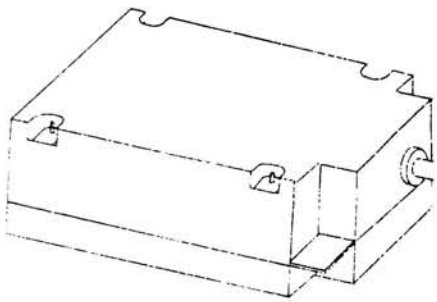
On the front of the case is a cable/off air switch and 5 push buttons (4 channels and on/off mains switch). There are 4 cables coming from the rear (these alone are worth what we are asking for the whole thing!) - 2m mains lead, 1.5m 8 core screened cable with 9 pin plug, 2m video in lead with coax plug and 2m video out lead with coax socket. As you would expect from a company like Visionhire, everything is top quality. The case can easily be utilised for other purposes - the dark brown inserts on the front are both easily removable, if required. Please note the low price we are asking in no way reflects their true worth - they're taking up a lot of space, so we need to shift them quickly!!

Z8939 £6.95 100+ 3.50 1k+ 2.50.

Z2171 24 character × 2 lines LCD by Optrex. High quality display with 192 character ROM; other characters can be displayed by generation in RAM. Other features include: EL type back light (details of high voltage generator supplied); cursor with control, blink character, scroll display, read and write display data, +5V and -7V supply with 150V AC required for backlight, data and power inputs by solder contacts on board, pin outs standard and compatible with other Optrex displays, extended temperature range (253 to 343°K), easily interfaced with either 4 or 8 bit uP's. Supplied complete with data.
Characters are 5 × 7 dot arrays with separate cursor.
1 Character measures 3.2 × 6.0 mm
Display size 93 × 16mm Module size 118 × 35mm
DP around £30.00. **Our Price** **£10.00**

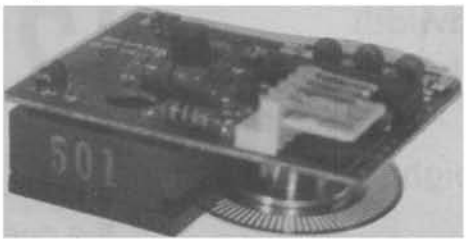
Z8852D Keyboard. Superb brand new high quality keyboard with LCD displaying 1 line of 10 characters and a further line with various symbols. 100 keys, inc seperate numeric keypad. Chips on board are 2x74HC05, 80C48. LCD + driver chip are easily removed. **Amazing low price - only £10.00**

HIGH QUALITY NICAD CHARGER



Z5136 Nicad switched mode battery charger for charging 6 × AA, C or D cells. 70mA 16 hour rate, 700mA 1.5 hour rate, 25mA float charge automatically switched in when battery reaches correct charge level. Outputs for fast and slow charging simultaneously if necessary, both on timers to prevent over charging. Fast charge set at 700mA, but internally adjustable. Slow charge set to 70mA. Both outputs switch to 25mA trickle charging after their respective periods of 1.5 hours and 16 hours. Supplied new with instructions and circuit diagram. Was originally supplied for charging cellphone batteries.
Price **£12.95**

Optical Shaft Encoder



Z345 Optical Shaft Encoder. Made by sharp. Ideal wherever the position or speed of a rotating shaft needs to be know - ie machine tool control, robotics etc. Supplied with comprehensive data sheet. Size of module 46 × 33.5 × 20mm; size of disc 28mm dia. Bush with grub screw will take a 4mm dia shaft. Disc has 96 slots. DP £48.18.
Our Price **£8.50**
Data sheet available separately **30p**

SURPLUS STRIPBOARD

Factory reject stripboard at approx half price!. Very minor blemishes - almost all totally usable. In sheets or packs as listed:

Z5294 Large sheet 390x205mm **£4.00**

Z5295 4 or 5 pieces, total approx 800 sq cms **£3.50**

Z5296 4 long strips, total approx 1800 sq cms **£7.95**

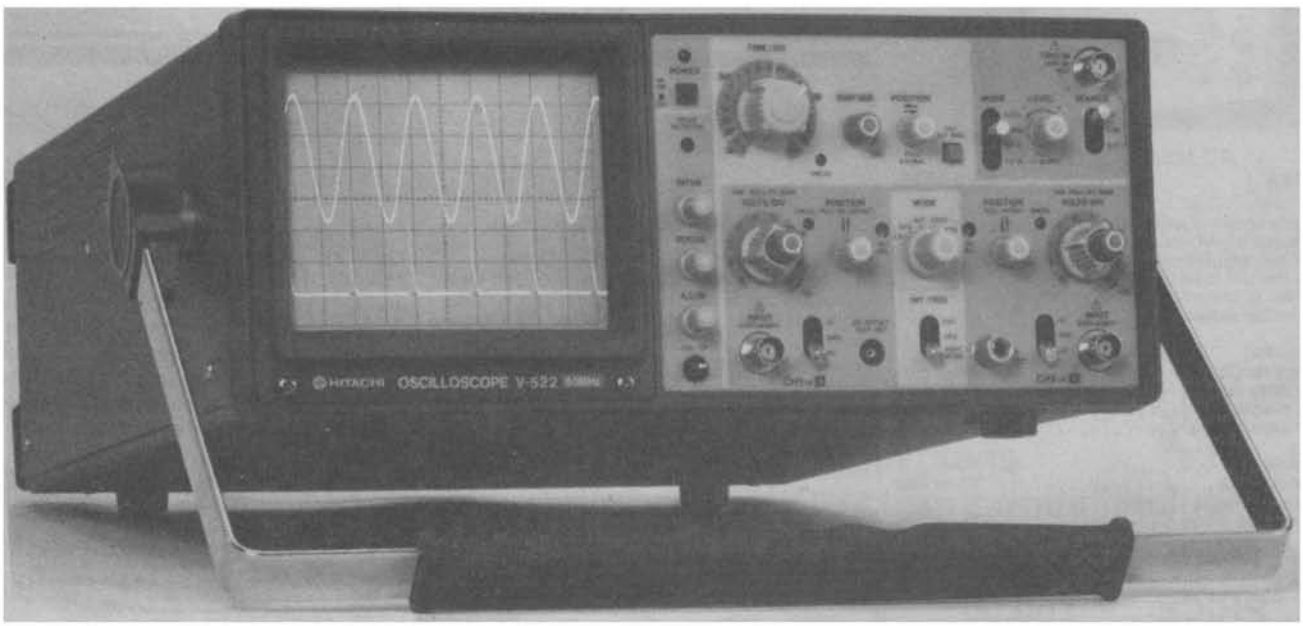
Cadillac Coupe de Ville

Z8976 1967 model, white with blue interior. 2 door. 7¼ litre V8 engine. Auto gearbox, Power steering, brakes, seats, windows and aerial! Tilt and tele column. Original working AM/FM radio with front and rear speakers. Air conditioning. Original/Import documentation. Excellent chrome. Tinted glass. Recent new whitewall tyres and exhaust. Superb bodywork and low mileage. A true full size American car - all 19ft 4ins of it! **Our Price (1 only) £6995**

EASY-TO-USE

HITACHI

50MHz SCOPES



- ★ Dual Channel
- ★ DC to 50MHz - 3dB Bandwidth
- ★ Large 6 inch Screen with Internal Gratical
- ★ 1mV Vertical Sensitivity
- ★ Slim, Compact & Lightweight Design
- ★ DC Offset Function
- ★ Alternate Magnification
- ★ Vertical Trigger Mode
- ★ TV Sync Trigger Circuit

V522 DC-50MHz, 1mV/div, Dual Channel, DC offset function, Alternate Magnifier Function **£745.00**

25% OFF

and FREE next day delivery!

Limited Offer - Order Now!

£555.55

Price Includes VAT- free delivery UK mainland only

*PRICES IN **BOLD** TYPE INCLUDE VAT: PRICES IN LIGHT DO NOT*